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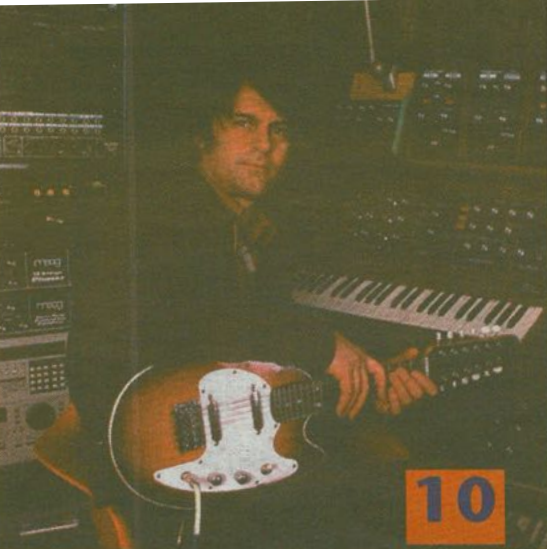
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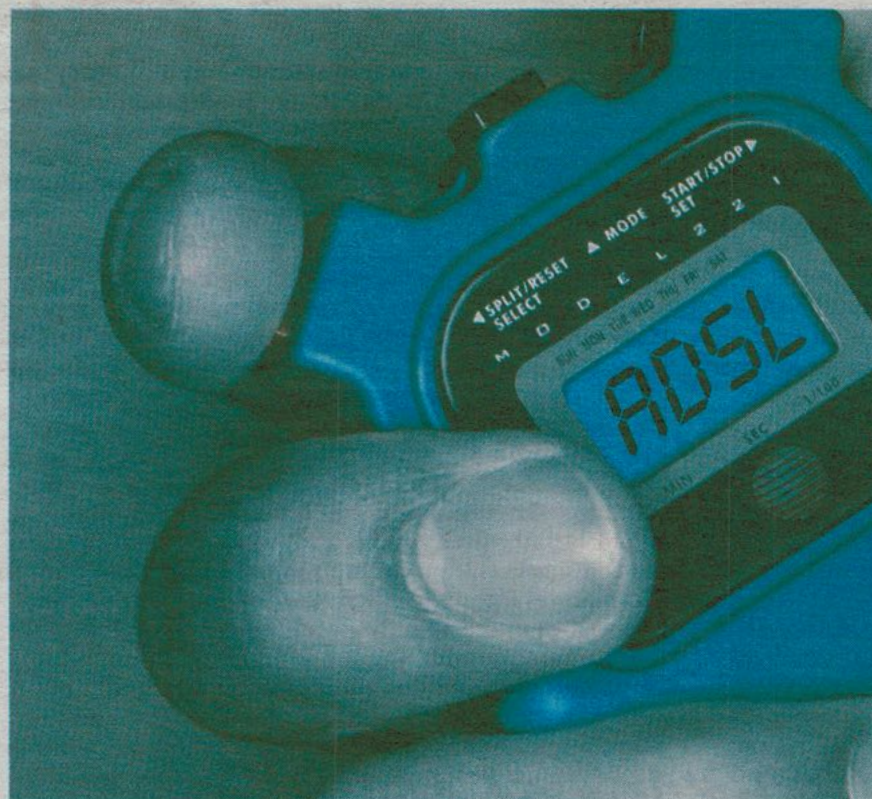
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# t o r o n t o c o m p u t e s !

April 2002

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I remember reading a passage in a book a while ago. I'm not sure what happened to this book because I rummaged through my library but couldn't find it. It was a corollary of the story of creation as told in the Bible. The first line was not "In the beginning God created the heaven and the earth." It was "In the beginning there was music."

Music is the international language. Music forms the backbone of all cultures. It has been

shown in countless studies that people who learn to play musical instruments tend to perform better in school, are more productive at work, and more well-rounded in character. It's a great shame that governments across North America are cutting music from the curriculums of elementary and secondary schools to save a few farthings. This is short-sighted and does not reflect the true interest people have in learning to create music themselves.

When we started our music column, Musical Odyssey, the response from our readers was overwhelming. It seems many of you are interested in using your computers for musical purposes. This could be anything from creating music using MIDI and digital audio to converting old LPs to MP3s and housing them on hard drives, which then feeds into the home stereo.

In the last two years computers have really come into their own as centres of music. Yes, there are the MP3s that blind-

sided the recording industry and are now creating a huge revolution in the music business. How will record companies and recording artists be able to make money in the future? At the recent Canadian Music Week symposium held in Toronto, recording artist/DJ Moby made a very interesting point during his keynote address. He said that perhaps artists will have to tour more and that people will then buy the recording directly from the artist. This will then return music back to the grassroots where it started – and perhaps where it belongs.

Ah, the grassroots. Every few years popular music heads there to refresh itself and become reinvigorated. Who knows what charming tunes are now being composed in a garage in Scarborough, or a basement in Mimico? And believe me, there is music being created everywhere. Walking around my neighbourhood I occasionally hear the unmistakable sound of thumping and banging of unmixed bass and drums, interspersed with the raw sounds of an unprocessed guitar.

It has been years since I was in a band, and the technology to record has become mind-blowing and extremely affordable. About 13 years ago we would record ourselves using a simple tape player and a microphone. A four-track recorder was high technology. Now, even the simplest computer-based recording software offers more tracks than you know what to do with.

Although it has become easier to record music, you still have to know the basics of music. This is where the role of education comes in, because even though there was music in the beginning, we have to make sure there will be music throughout.

Nestor Gula can be reached by e-mailing [nestor@tcp.ca](mailto:nestor@tcp.ca) ♦

## Reader Feedback

### Work-at-home woes

Regarding Sharlene Myers's article regarding working from home (March TCI), there are some downfalls that may affect one depending upon one's personality. I have worked from home for close to 14 years now. My only work-related away time would be to visit the office or attend appointments with buyers. I miss the daily contact and now feel that I live here and I don't want to work here as well. It can become boring working from home after a time.

Jim Smith

### Two strikes

Harold Lass's article about hard drives struck out on two counts. First,

the purported Gates quote had nothing to do with hard drives. It was in reference to RAM. It would have been absurd to talk about 640K hard drives in 1981. How old was Harold Lass at that time?

Second, Gates maintains that he never made that statement. See the Gates interview at: [www.usnews.com/usnews/biztech/gatesivu.htm](http://www.usnews.com/usnews/biztech/gatesivu.htm)

So, it seems pretty clear that Harold Lass shot himself in the foot.

Don Leslie

### Syncing up

Ron Elmer wrote (Letters - March TCI) of the ability of some digital cameras to have a flash sync up to 1/1000th second and challenged read-

ers to "Tell me one conventional SLR that can do that." Ron, the Minolta Maxxum 5 SLR film camera will sync up to 1/4000th second (with dedicated Minolta flash units). I believe there may be others that also meet your challenge.

George Dunbar

### Correction

In the March issue of *Toronto Computes!*, we inaccurately stated that *QuickTax* offers 15 returns for \$24.95. *QuickTax* only offers five returns. *Toronto Computes!* regrets the error and apologizes for any inconvenience to our readers during tax season.

## Letter of the Month

For his letter, Jim Smith wins a copy of Westwood Studios' *Command & Conquer: Renegade* (reviewed this month on page 55). This first-person shooter based on the popular *Command & Conquer* strategy games lets you go toe-to-toe with the many enemies from C&C such as Major Havoc, a one-man army. Rated: Teen



Letters on issues raised in the paper or general computer topics are welcome. Please be brief. We regret that we are unable to look up stories from past issues, suggest products, or solve all your computer problems. All correspondence must include your full name in addition to your e-mail or snail-mail address. Letters may be edited for space or content.

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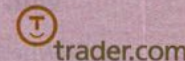
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By CHRIS TALBOT

As if Rogers hasn't annoyed their customers enough since the change from the @Home cable service to their own brand (poor service being at the top of many users' complaint lists), the company once again took action to make their competitors' services look more and more enticing.

A threatening e-mail was sent out to thousands of users suspected of using the Rogers high-speed Internet service to run servers (such as file transfer protocol servers). While many of those who received the e-mail probably were culprits, many were legitimate users who had done absolutely nothing wrong. Their only crime was using the Internet service they had paid for. (Rogers, where would you like to put the other foot?)

According to Rogers, this all happened because the company decided to try to crack down on users running servers on the high-speed Internet service, which is not allowed under usage contracts. Rogers seems to think the problem is a serious one; it stated a figure that one percent of its users make up for 30 percent of the traffic.

Rather than badgering its customer base and scaring people away to competing high-speed services, Rogers could solve this problem itself if it really wanted to. Here's a quick summary of the solution: What do you need to run an FTP server?

Simple – a static IP address so people can find you at the same place every time they want to download something. If Rogers set up their high-speed service to change IP addresses more often, users would find it nearly impossible to run servers off their desktop machines through the cable modem.

#### Rule of the robots

The Canada FIRST (For Inspiration and Recognition of Science and Technology) Robotic Games, a competition where high school students compete as teams to build robots, was held between February 28 and March 2 at Humber College's Athletic Centre in Toronto.

Turner Fenton Secondary School of Brampton took home the SPAR Aerospace Award (SPAR is best known for the Canadarm used on space shuttles) in this year's competition for their robot, affectionately known as Clyde. During the regulation heats, the Turner Fenton team assumed first place and

kept the lead until the end. There were 25 teams participating in the competition.

The SPAR Aerospace Award is being retired after this year's competition. Next year marks the 10th anniversary of the Canada FIRST Robotic Games, and a new award will be unveiled for it then.

#### Canada bitten by the Siege bug

As this issue hits the streets, Microsoft Canada's *Dungeon Siege* Recruitment Drive Tournament and Contest is about to come to a close.

Gamers across the country logged onto [www.microsoft.ca/dungeonsiege](http://www.microsoft.ca/dungeonsiege) to register for the contest. Each person chose the character that best suited their personal strengths and skills – warrior,

mage, archer or dwarf – and answered questions to prove their might and mettle at computer games. After that, they asked their friends to enter (earning points for doing so). The gamer with the most points by 11:59 p.m. on March 31 will win an Alienware Aurora DDR Gaming System. Five runners-up will receive an eVGA.com graphics card powered by NVIDIA GeForce4 Ti 4600 GPU combined with a SoundBlaster Audigy Gamer Soundcard. Also, up to 42 others will receive a *Dungeon Siege* prize back, including a cloth map of the Kingdom of Ehb, a *Dungeon Siege* T-shirt and a *Dungeon Siege* strategy guide.

Microsoft's *Dungeon Siege* will be available for purchase in April. ♦



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# Home recording with Kurt Swinghammer

By NESTOR GULA

Kurt Swinghammer likes to create in the comfort of his home. The Toronto-based musician and visual artist has divided his funky apartment into roughly three equal parts – a graphic studio, a music studio and a living space. He has been practicing home recording for about 25 years, during which he has recorded and released eight cassettes and four CDs. He has also composed and recorded music for many movies and television shows, including the theme to CBC's *Smart Ask* and *Marketplace* and the movie *The Cockroach That Ate Cincinnati*.

"My first recordings were on a tiny reel-to-reel," he reminisced. "When I was about 18 I borrowed a four-track and caught the bug doing that." He later bought a Tascam 244 four-track, which he described as a "fantastic work horse." "I would make elaborate productions by sub-mixing many tracks." He released about six or seven cassettes in the 1980s.

For Swinghammer, MIDI gear came in at the cusp of the '90s along with an ADAT system. An ADAT system is a modular digital recording system still using tapes, VHS tapes, on which you could record up to eight tracks. He had two of them, allowing him a total of 16 tracks. That system lasted about five or six years, according to Swinghammer. He recorded his CD *Vostok 6* (released in 1999) with the ADAT system.

## Blending the new with the old

He got an Apple Macintosh G4 and the *ProTools* recording system in November 2000. "I was waiting for the price to get to the point where it did not seem to be a ridiculous amount of cash," he said. He recorded his latest CD, *Black Eyed Sue* (released in 2001) on this system. He is currently working on the score for a National Film Board documentary about Marshall McLuhan, to be narrated by New York-based musician/performance artist Laurie Anderson.

Swinghammer chose the *ProTools* system "because of how it dominates the film world," he explained. "A feature film I did a couple of years ago had to be done in *ProTools*. Every film project I've done since then has been delivered on *ProTools* and it makes it a lot easier for everybody involved and saves lots of money." Although it only allows for 24 tracks of recorded audio (Swinghammer has the light version) he

is able to bounce and squash tracks together just like he used to do on a four-track porta-studio.

Besides the older synthesizers and other electronic instruments, Swinghammer has an old Atari computer standing prominently in the midst of all his recording gear. "I've had the Atari since 1989 or so. I use *Notator* for sequencing." He bought it brand new and is still a big fan of this seemingly ancient computer. "It's never crashed. A lot of people think it's obsolete but the program is fantastic. It does all the sequencing that you'd ever want to do." He explained, "I know how to use it very well. I don't want to get something new just so I can read the manual so I can do exactly what I'm doing right now."

He'd had other Macs before he bought the G4. He tried remixing his *Vostok 6* album on an older Mac 8100 (the first series of Power PC). The computer kept getting bogged down. "That's when I realized that computers are perishable," said Swinghammer, laughing.

## High tech problems, low tech solutions

Recording at home presents many challenges. One is the seeming miles of cables involved in hooking everything together. For Swinghammer, keeping cables tidy is not an issue. "It's like how do you keep spaghetti straight on a plate," he said, pointing to the jumble of cables that lies below his keyboard. "I've never dealt with it elegantly because you always have to repatch the whole time. Every once in a while I will tear everything down and put it up again."

To avoid noise from the computer's fan – unwanted noise being the bane of every musician – he came up with an ingenious solution. "People would usually build elaborate contraptions to muffle the noise. I just drilled a hole through the floor and put the computer in the basement." The cable between the monitor and computer is really taut. "The computer is tucked right under the floor," Swinghammer said. "I was really lucky that it worked out. If it would have been another two inches, I would not be able to do it."

Although his studio is filled with seeming exotic instruments spanning some three decades, he has a very practical view of them. "I see these instruments as tools. I'm not a collector or anything." He also does not like a lot of the frills, plug-ins and effects that are available with most recording software. "I prefer outboard gear for processing sound like delays and such. I find that

to get a good sound it will take a lot of processing power." True to his approach of using the computer as a hard disk recorder, he rarely plugs his guitars directly into the computer interface. "I'll run it through my amp to get the sound of the amp and the atmosphere of my room. My guitar, amp and this room will give a sound that's not quite like everyone else's. If everybody has the same plug-ins and effects, things tend to sound the same."

Swinghammer has not been enamoured by the loop recording that is so prevalent in digital recording. "I record just like I would be using a tape deck. I tend to go for performance because often if you play some part from top to bottom, you'll make some boo-boos and it's usually these bits that are interesting," he explained.

The worst part about digital recording at home is the mouse, according to Swinghammer. This is worst during the all-crucial mixing down phase, when all the recorded tracks are combined to two stereo tracks. Unlike with a traditional mixer, where you can manipulate many sliders with all your fingers, a mouse only lets you do one at a time. "I'm confident that by next year the manufacturers will realize that there are thousands and thousands of musicians, like me, who are recording at home, and will start to produce inexpensive interfaces."

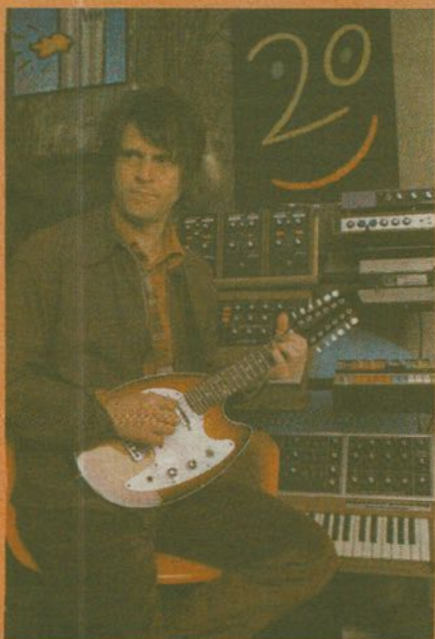
## Staying independent

Swinghammer is a proudly independent artist and is not signed to a major record label. As with all independent artists, there are always problems in getting the CDs to the stores. His *Vostok 6* album was released on Ani DiFranco's Righteous Babe records label. His other works are available at Maple Music ([www.maplemusic.com](http://www.maplemusic.com)), an online store for Canadian artists, mainly independent but also featuring albums from Cowboy Junkies, Blue Rodeo and Gord Downie from The Tragically Hip.

"They carry only Canadian content and it is a great resource," said Swinghammer. "They sell merchandise and get a really good response." He's not interested in selling things through his own Web site ([www.swinghammer.com](http://www.swinghammer.com)). "I'm just not interested in licking envelopes," he explained. There's also the problem of taking credit cards. "It's an elaborate process that costs money. That's like a job. My job is to make music." ♦



"My guitar, amp and this room will give a sound that's not quite like everyone else's. If everybody has the same plug-ins and effects, things tend to sound the same."



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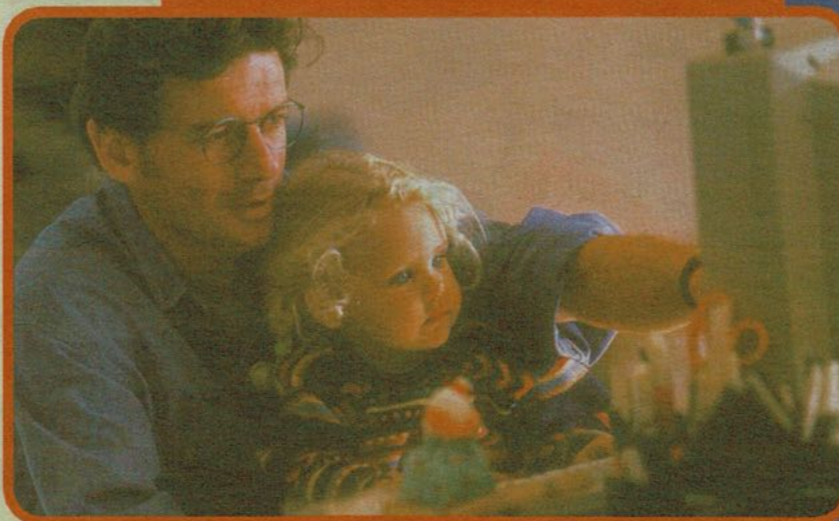
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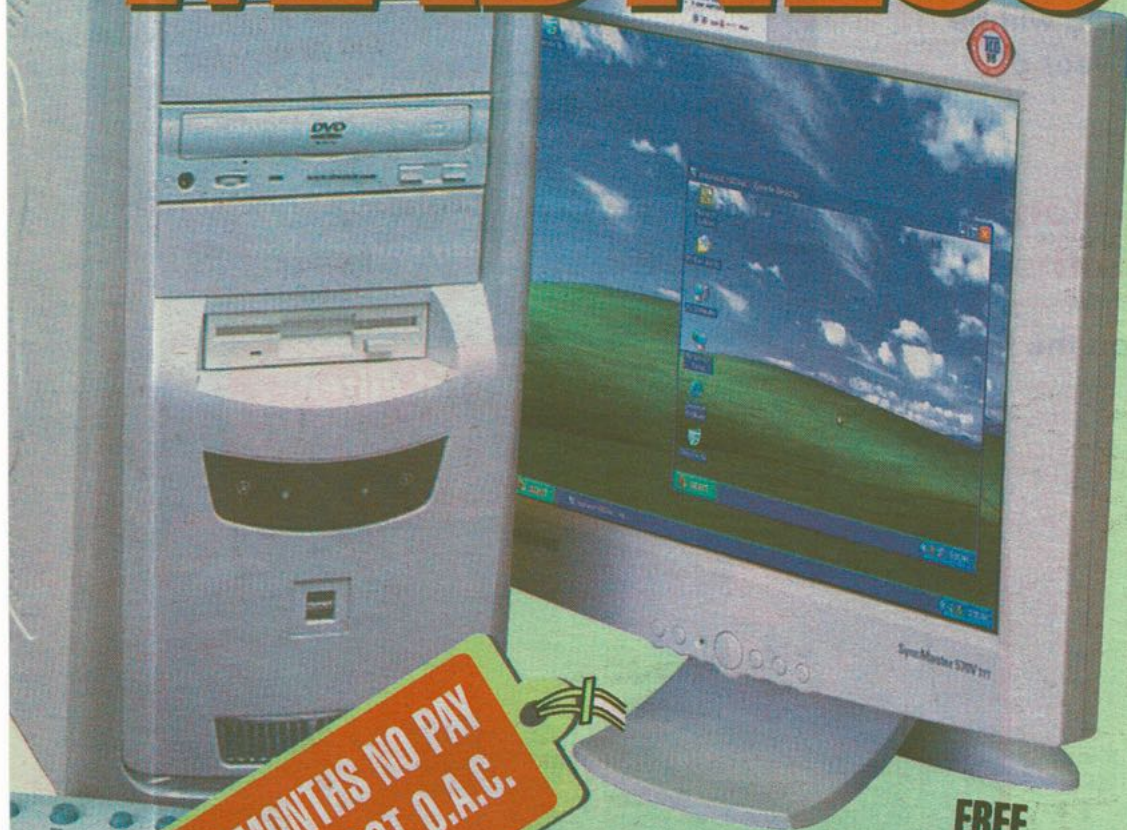


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# Sounding off: Multimedia speakers

By SEAN CARRUTHERS

A lot of pundits have predicted that the computer will soon take over as the principle home entertainment device, if it hasn't already. It's pretty easy to understand why. The emphasis of multimedia features on the home PC — MP3 audio, DVD movie playback and immersive gaming — are all key selling points for new computers.

The irony is that when you buy a new PC, the standard speakers are generally fairly mediocre, even when the soundcard is quite good. If you're planning to use your computer for gaming or DVD playback, it's definitely worthwhile to invest the extra money in a reasonably good speaker set because the results can be absolutely stunning.

For years, the standard speaker set has been a pair of low-wattage white plastic specials, perfectly good for general use, but not something that you'd mistake for quality. A lot of speaker sets now include a subwoofer for better bass performance, and there's a growing trend towards multi-speaker sets for surround sound in both games and movies.

## What do the numbers mean?

Many speakers available today are listed with an x.1 number (2.1, 4.1, 5.1, 6.1 or 7.1), which indicates the configuration of the speakers, with the .1 always meaning the set includes a subwoofer. A set designated 4.1 will contain four satellites (left and right front, left and right back) and one subwoofer. These sets will be good for the majority of games and movies. Audiophiles and serious movie freaks may want to go for a set designated 5.1 instead, which also adds a front centre channel for added definition. (True freaks may want to opt for a 6.1 or 7.1 set, but they're more expensive and may be overkill for most computer systems, even if you can find applications that will take full advantage of the 6.1 or 7.1 configurations.)

If you like your audio loud, the wattage rating is worth paying attention to when making your choice. Without getting into the minutiae, the basic rule is that a higher wattage rating means a louder set and (generally speaking) cleaner reproduction of the signal at the same decibel level. This month we've looked at speaker sets ranging from 48 watts through to 400. If you're not going to be blasting the sound at full volume all the time, a 48-watt set should be perfectly adequate. If you aren't happy until the walls are shaking, you should look at something with a higher rating.

This month the majority of the testing was done on a PC containing a 1.2GHz AMD Athlon and 256MB of DDR SDRAM. Creative Labs kindly provided us with a SoundBlaster Audigy X-Gamer card, which ensured a clean audio signal throughout (the card has a signal-to-noise ratio of >100dB, the cleanest consumer-level card currently available; see [www.audigy.com](http://www.audigy.com) for more details). For the Yamaha set, we also cracked out the Guillemot Maxi Sound Fortissimo, which has an optical output. (A

number of other Yamaha-based soundcards and Creative's Audigy Platinum also contain optical outs.)

## Altec Lansing ATP 4

From: Altec Lansing Technologies Inc.

[www.alteclansing.com](http://www.alteclansing.com)

Estimated price: \$240 (converted from US\$150)

Altec Lansing speakers are always interesting because they often skew slightly from traditional design. This 4.1 set is a bit different, too, with a skinny upright portion on each satellite speaker, with the base of the speaker wrapped around a "down-firing mid-bass driver" (meaning that the speaker points down at the desktop, which can act as an extra resonator). As with many of the Altec Lansing sets, the volume and tone controls are built into the base of the front right speaker.

The sound on the set is quite good. At 80 watts total output power, the set is reasonably loud for a small workspace or room in the home. There can be a bit of a muddy sound when you crank the volume and bass up to the top, but we found that you can clean it up a lot by lowering the bass level slightly, or if you're feeling ambitious, by finding a way to raise the satellite speakers slightly to bring the cones away from the desktop a bit. The most serious issue we have with the speakers is the digital volume/bass/treble adjustment, which is done by spinning a knob around and around (several times around to go from minimum to maximum). It's not that serious, though — you can get used to it quite easily, and the speaker set sounds good enough that you don't even think about it too much.

## Creative Inspire 5.1 5300

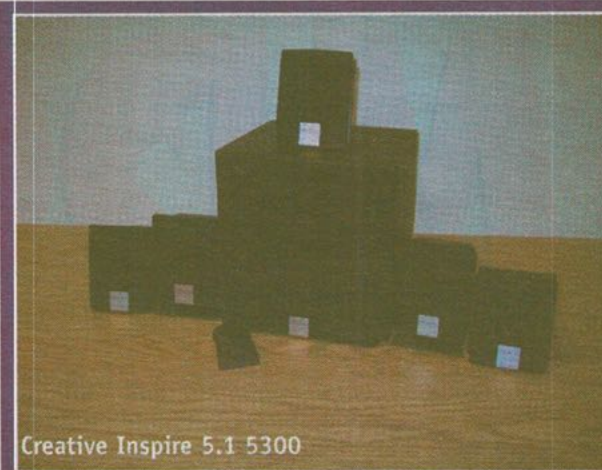
From: Creative Labs

[www.creative.com](http://www.creative.com)

Estimated price: \$150

Already noted for its Cambridge Soundworks division (and its exceptional quality), Creative's decision to release a speaker set under the Creative banner again may seem a bit like backtracking. Face it,

continued on page 18



Creative Inspire 5.1 5300



Logitech Z-560



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5. By submitting compositions and the signed entry form to this contest the entrant claims that their composition is original work and he/she holds all rights to the composition. The contestant also agrees to give *Toronto Computes!*, its parent companies and subsidiaries the non-exclusive right to use the compositions for future advertising and publicity purposes without additional compensation for a period of two (2) years from the date of the contest's closing date.

7. All entries must be postmarked by 5 PM EST August 2, 2002. Winners will be chosen by August 16, 2002. Winners will be contacted for their choice of prize. Results will be announced in the September issue of *Toronto Computes!*

8. All decisions of the judges are final.

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Phone: .....

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## Sounding off: Multimedia speakers

neighbours that you don't want to bother. Each of the speakers connects to the subwoofer via wire with exposed ends just like on a component stereo, which means you can replace the wire fairly easily if you want longer or better-shielded cables. The speakers come with mountable-metal bases, which can be removed using the included hex key, and reoriented.

Another minor complaint is that the connectors to the PC are hardwired into the back of the speaker control pod, and the ends that connect to the PC have a right-angle connector, which could be a problem if you have another card under or above your sound card. Those complaints are all fairly minor, though: The sound coming out of these speakers is nothing short of jaw-dropping, especially if you like it loud and booming.

### Monsoon MH-505

From: Level 9 Sound Designs

www.monsoonaudio.com

Estimated price: \$290 (converted from US\$180)

Monsoon Audio does work in three major categories — automotive, home theatre and multimedia speakers. The automotive speakers are fairly specific to certain models of cars and the home

theatre speakers are very pricey, so the closest most of us will come to Monsoon speakers is in the computer/multimedia world. The MH-505 is Monsoon's more value-oriented 5.1 set, and it comes in at 85 watts output power RMS (120 watts max). Like its louder and more expensive siblings, the MH-505 set uses Monsoon's flat-panel style Planar Focus Technology.

Overall, the sound is a bit flatter than the other speakers we looked at this month — they didn't have the same room-shaking bass — but the sound was exceptionally clear all the way up to full volume. At that point, any distortion introduced into the sound will likely be a limitation of the soundcard — we got a bit of distortion using the older Yamaha-based card, but the SoundBlaster Audigy was still exceptionally clear. One of the nicest features on Monsoon sets is the well-placed mute button, allowing you to kill the sound instantly.

Those looking for room-shaking bass won't find what they need here, but those looking for excellent clarity will love this set.

### Yamaha TSS-1

From: Yamaha Canada

www.yamaha.ca

Estimated price: \$299

Yamaha has been a mainstay in the PC speaker world, but has mostly focused on two-speaker sets. The TSS-1 is the company's 5.1 set and is available in both black and white. At 48 watts RMS, it's not one of the louder sets, but it's one of the more versatile, featuring both analogue and digital inputs (in addition to the two standard 1/8-inch plugs, the back of the amplifier unit also sports an optical connector and a coaxial RCA-style connector, and the set ships with the connector cables, too).

The amplifier unit is slightly more complicated than the other sets this month. In addition to the great big volume knob at the bottom, there are also smaller knobs for centre, surround and subwoofer. There are also buttons at the top for switching between speaker modes (digital vs. analogue, Dolby mode where applicable), for testing the speaker position and for muting. A bit more confusing is a little selector switch on the back of the box for selecting the number of speakers attached to the system, which seems to partially duplicate the button functions. The amp unit can be laid down or stood on end and comes with a small bracket for angling the front end upwards, if desired.

As you'd expect from a 48-watt system, the system isn't exceptionally loud,

but it certainly does the job — if you're in a small apartment, it will be more than adequate. When cranked, there's a tiny bit of distortion with exceptionally low bass noises (we got some clipping when playing Holst's *The Planets*, especially midway through track 7 when the bass notes on the organ kick in). Switching from analogue to digital boosts the volume level slightly and clears up the sound substantially. At lower volumes, the sound quality is a-okay, and if you're not after raw power the versatility of the inputs makes this set a very attractive choice.

### Editor's Choice

Because of the range of wattage ratings and because it's a mix of 4.1 and 5.1 systems, it's pretty hard to say one is necessarily better than the other. For those who just want the sound at reasonable volumes, all of them are great. The Creative offers exceptional value, the Altec Lansing and Monsoon sets are very clear and the Yamaha set is incredibly flexible. We're giving the nod to the Logitech Z-560 set, though, for exceptional clarity and quality, even though it came in at about the same price point as many of the other less powerful sets. ♦



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RADEON 7500 64MB AGP	\$140
RADEON 8500 64MB AGP	\$256
A-I-W 7500 64MB AGP	\$260

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LG 52X IDE CD Rom	\$46
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Inspire2.1 2600 w/Sub	\$113
Inspire4.1 4400 w/Sub	\$84
Inspire5.1 5300 w/Sub	\$139
Inspire5.1 5700 w/Sub	\$399

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<b>Sound</b>	
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Live 5.1 oem	\$57
Audigy 5.1 oem	\$106
Audigy MP3+	\$144
Audigy Gamer	\$144
Audigy Platinum	\$286
Audigy Platinum eX	\$359

## Network Products

<b>D-Link</b>	
D-Link 530TX Ethernet 10/100BT	\$22
D-Link 713P Wireless Router	\$300

## SURECOM

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505ST 5-port 10BT Hub	\$34
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- GeForce2 MX200 32MB AGP
- On-Board Audio
- 17" LG E700B Flatron Monitor
- LG 8420B 24x10x40 IDE CDRW
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- GeForce4 MX400 64MB TV-Out AGP
- On-Board Audio
- On-Board Lan
- 15" NF-1500MA LCD Monitor
- LG 4120B DVD/CDRW Drive
- 56K V.90 PCI Fax Modem
- Slim PS/2 Internet Keyboard
- PS/2 Wheel Mouse



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- Mid Tower Case w/300W PS
- 1.44MB Panasonic Floppy
- 40GB 5400rpm Hard Drive
- On-Board Video
- 17" Samsung 750S Monitor
- LG 52X IDE CD ROM Drive
- On-Board Audio & Lan
- 56K V.90 PCI Fax Modem
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64Mb Radeon 7000 SDR 3D Video  
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Satellite 1800HV9	P3/1.1Ghz	14.1" TFT	256Mb	56K/Lan	20Gb/DVD/CDRW	\$2840
Satellite 1900JFS	P4/1.6Ghz	15.0" TFT	256Mb	56K/Lan	30Gb/DVD/CDRW	\$2699
Satellite 6000PRO	P3/1Ghz	14.1" TFT	256Mb	56K/Lan	20Gb/DVD	\$2699
Satellite 6000PRO	P3/1.13Ghz	15.0" TFT	256Mb	56K/Lan	30Gb/DVD	\$3199
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Maxtor Ext EIDE1394 400Gb 8000/5400R.....\$349/469  
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Maxtor Atlas 7.2K 9.2/18.4/36.4Gb.....\$249/319/529  
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# Online and legal music coming to Canada

By DAVID ROSEN

Next month, two online music services will open their digital doors in Canada, allowing customers to listen, download and even burn music tracks for a fee. Unlike some of the existing organizations, which play fast and loose with copyright agreements and music licensing laws, PressPlay and Moontaxi will give Canadians legal (but strictly controlled) access to digital music.

Los Angeles-based PressPlay, owned by music giants Sony Corporation and Vivendi Universal, offers subscribers access to a broad catalogue of music through streaming and downloading – and allows “portability” through CD-R burning. According to the company, the service will give customers access to a vast online library including music from Sony, Vivendi Universal and EMI Recorded Music.

Several independent labels such as Madacy, Matador, Navarre, OWIE, Razor & Tie, Roadrunner, Rounder and Sanctuary have also signed on with PressPlay, citing the need to gain access to the same online music market as the major record companies.

In partnership with Canada's Sympatico-Lycos, PressPlay will offer its subscription service to Canadians who want to listen to an array of rock, pop, jazz, country, hip-hop and R&B songs on demand. Rumoured to cost \$9.95 per month (the company had not finalized prices by press time), the Canadian version of PressPlay will let customers access streamed music much like digital cable subscribers currently listen to music channels over their home TV.

But the estimated \$9.95 a month will just get you access to streaming music; it won't let you download the actual music file, nor will it allow you to burn tracks with your PC or Mac. To get this increased functionality, you'll have to pay an additional (and, as yet, undisclosed) monthly fee. However, when the PressPlay service was launched in the United States a few months ago, four tiered price plans were announced.

In the U.S., PressPlay's Basic Plan costs US\$9.95 per month, and allows 300 streams and 30 downloads. The Silver Plan costs US\$14.95 and lets customers stream 500 tracks and download 50. Under the Silver Plan, customers can also burn 10 tracks (of the 50 downloaded) onto a CD-R. The company's Gold Plan



iMac

costs US\$19.95 per month, allows 750 streams, 75 downloads and 15 burns. PressPlay's Platinum Plan costs US\$24.95 and lets customers stream 1000 music tracks, download 100 of them and burn 20 tracks onto CD-Rs.

## Moontaxi - no counting, no downloads

A Toronto-based startup called Moontaxi thinks it has the answer to PressPlay's complex model of counting tracks. When Moontaxi's service launches next month, Co-CEO Derek van der Plaats says it will charge only \$5.99 per month for unlimited access to streamed music in a variety of genres.

Initially launching with classical and jazz music (and adding additional genres at a later date),

Moontaxi's streams “will provide three personalized music channels in which individual tracks are randomly presented to listeners,” explains van der Plaats.

A second component of Moontaxi's service is called Music Locker. Here, music lovers can pick 100 tracks from the company's playlist and then create virtual CDs in which the specific artist, track and play order are specified. According to van der Plaats, you will be able to change the content of your Music Locker at any time. Thus, if you fancy listening to a (virtual) CD of Beethoven one week and Bach the next, you simply change your Music Locker.

However, Moontaxi – a company partially owned by EMI Group – has no immediate plans to offer downloads. “We won't be offering downloads for at least six months,” explains van der Plaats. “We have to deal with the current restrictions of the music companies. Six months from now, the entire landscape will have probably changed and so we'll be looking at other services.”

## Other labels

Of course, Sony, Vivendi Universal and EMI Group aren't the only musical games in town. The other two major labels – AOL Time Warner and Bertelsmann AG – are also involved in online music distribution. The problem for Canadian music lovers is that MusicNet, a company owned and controlled by these two labels (and EMI Group) has no immediate plans to move north of the border.

Will paid, legal online music distribution ever take off, especially since many music lovers have already downloaded millions of illegal songs? It will, if you believe a recent survey from Jupiter Media Metrix. Citing a huge market for legal downloadable music, the market research company projected US\$1.6 billion in worldwide online music sales this year, and a whopping US\$6.2 billion by 2006.

Naturally, only time will tell if this forecast is correct, but many in the industry are cautiously optimistic.

Clive Hobson, spokesman for Sympatico-Lycos explained, “it's a huge market ... but how the Canadian market will shape up, remains to be seen.” ♦

# Digital audio formats made easy

By GEOFF MARTIN

When it comes to audio formats, MP3 is still the king, at least as far as being able to trade and download them with a decent level of selection. But truth be told, MP3 doesn't offer the best compression ratio out there, nor does it offer the best audio quality. So, for those seeking better compression ratios, better audio quality or a comfort level somewhere in between, what follows is a brief rundown of the alternatives.

Of all the alternative formats out there, the one that might have the best chance of taking the digital audio throne away from MP3 is AAC ([www.aac-audio.com](http://www.aac-audio.com)), which stands for Advanced Audio Coding. The AAC format was introduced by Dolby Laboratories at the 2001 Consumer Electronics Show in Las Vegas, and Dolby claims that while its AAC files sound better than MP3 files encoded at similar bit rates, they are also up to 30 per cent smaller, which means faster downloading time and less time to rip an audio CD into AAC format. Of particular interest to the recording industry, the format also comes with built-in copyright protection, where necessary. Dolby recently introduced a new AAC consumer encoder, which puts the power to record files in the AAC format into the hands of consumers, and this encoder is built into the newest version of *Liquid Audio* software ([www.liquidaudio.com](http://www.liquidaudio.com)).

Next is the Windows Media Format, or WMA ([www.windowsmedia.com](http://www.windowsmedia.com)), which was born when Microsoft was forced to sit back and watch the start of the MP3 revolution without making a plum nick-

el from it. Not content with its headlock on the browser and operating system industries, Microsoft didn't waste much time in developing the WMA format and is now pushing the technology wherever it can get a foot in the door. On the bright side, the format boasts smaller file sizes than MP3s with equal sound quality; but on the dark side, the format features copyright protection that is often unwieldy and it is still incompatible with certain operating systems (read: Linux), as well as many portable music players. Until some of these issues are worked out, all the muscle of Microsoft won't be enough to take WMA to the top.

Ogg Vorbis ([www.ogg-vorbis.com](http://www.ogg-vorbis.com)) is another format getting the attention of many audiophiles, and not just because of its unusual name. Unlike MP3, which is a patented audio format owned by the Fraunhofer Institute in Germany, Ogg Vorbis is a completely open-source, roy-

alty-free format. The royalty-free consideration is a big one, since the Fraunhofer Institute now wants to charge a royalty fee for all products that use its MP3 technology — a story that could get very messy if the Institute ever decides to make good on its threats. As it stands now, the Ogg Vorbis format continues to improve thanks to its grassroots developing community, with compression rates getting better while the audio quality remains steady.

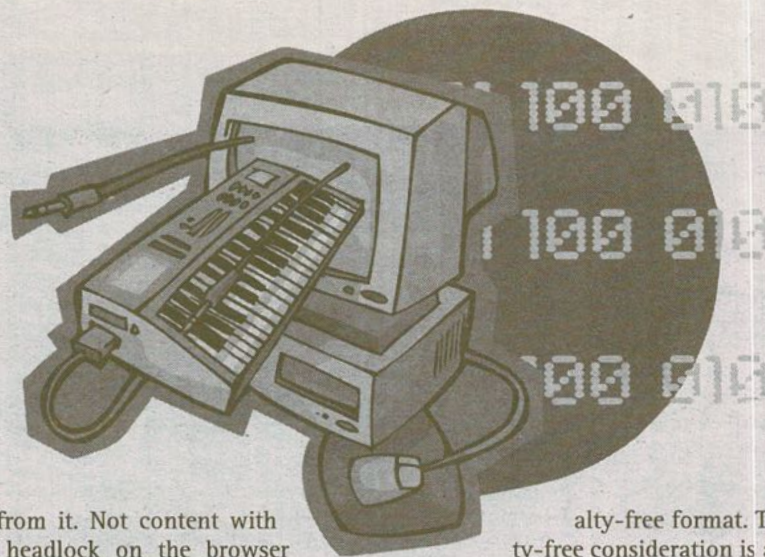
One of the newer formats is MP3Pro ([www.thompson-multimedia.com](http://www.thompson-multimedia.com)), another innovation of the Fraunhofer Institute, in conjunction with Thomson Multimedia. MP3Pro files look and act the same as a regular MP3 file, and your regular audio player will play an MP3Pro file just like any regular MP3. But the files are embedded with extra high frequency information and you'll only get the added benefits of this extra digital info if you play the files in an

MP3Pro player. This extra information effectively doubles the perceived audio quality of a digital file, which means that a regular MP3 encoded at 128Kbps could be stored as an MP3Pro file encoded at 64Kbps. Even with such excellent savings on storage space, however, the MP3Pro format has suffered from little or no publicity and poor adoption rates.

Finally, any true audiophile worth his or her salt is currently evangelizing about the Monkey's Audio format ([www.monkeysaudio.com](http://www.monkeysaudio.com)), which is likely the best format for people who, well, don't like their audio "monkeyed" with. Billed as a "lossless audio compressor," Monkey's Audio boasts a compression rate of nearly 4 to 1 in some cases, with no loss in sound data, which means that you could decompress a Monkey's file back into a digital copy that is identical to the original. As the format's site suggests, "think of it as a beefed-up Winzip for your music."

Whatever choice you make when you're encoding your own digital music files, you must first accept that for now, MP3 is still the most widely accepted format, and so for the least headaches, it's still the best option. It works seamlessly across all platforms, it works on nearly 100 per cent of portable players, and it has the widest selection of songs available for download. But for those looking for better quality or smaller file sizes, MP3 is quickly beginning to look like the tyrannosaurus rex of the audio world: It's sitting at the top of the food chain, but we all know it's eventually headed for extinction.

May the best format win! ♦



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# Metronome Canada: The city of music

By CHRIS TALBOT

After a decade of gathering support, raising funds and drafting plans, John Harris's dream of a national music symbol could make a significant leap forward as early as July 2003 when construction of Metronome Canada could begin. After ground is broken, it will take two years to build Metronome Canada on the waterfront at the base of Bathurst Street in Toronto.

Being billed as the world's first music city, Metronome will grow out of the Canada Malting Silo Complex and will contain a music museum, an 800-seat concert theatre, offices for the music industry, a music education centre, music-related stores, restaurants, a music-themed children's playground and a floating exhibit celebrating Yorkville Avenue of the 1960s called The Riverboat. If everything goes as planned, Metronome will become a symbol of Canadian music accomplish-

ments — past, present and future.

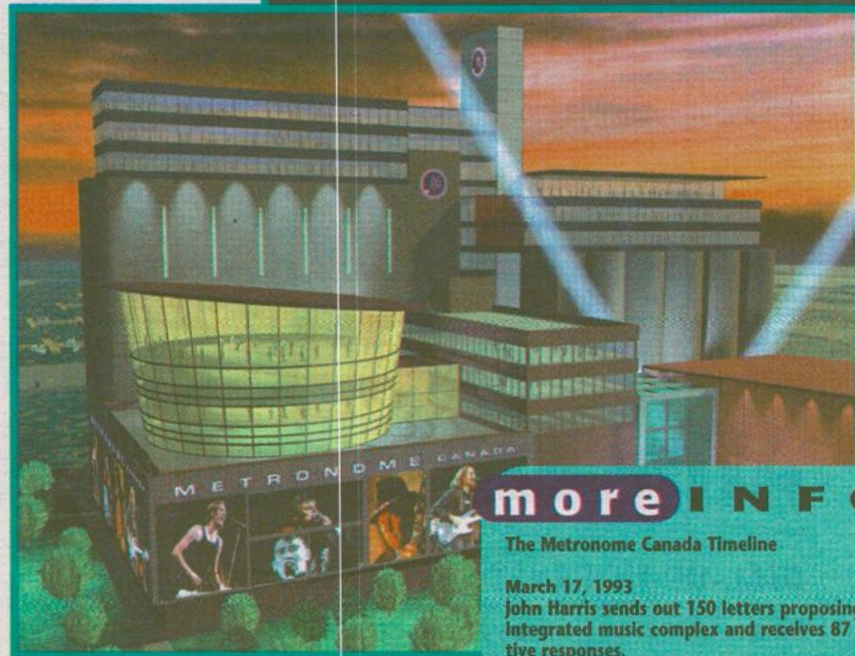
"It's an initiative to integrate, educate, celebrate and promote all facets of Canadian music," said Harris, president of Metronome Canada and the founder of Harris Institute for the Arts. Metronome's four main focuses are business, education, performance and celebration, he added.

Since the first letters requesting support were sent out in 1993, 62 music-related companies have become patrons of Metronome. According to the Metronome Web site ([www.metronome-canada.com](http://www.metronome-canada.com)), 72 music-related companies have expressed interest in leasing space once it has opened.

Metronome will occupy approximately 33,750 square metres (375,000 square feet) of space. The grain silos at the Canada Malting Silo Complex will be re-used for Metronome (they date back to 1928 and 1944), and the rest of the music city will be built around them.

The creation and recording of music is

becoming more intertwined with technology every year. Those involved in the music industry and those who make music part of their lives understand how much of an impact technology has had



## more INFO

### The Metronome Canada Timeline

**March 17, 1993**  
John Harris sends out 150 letters proposing an integrated music complex and receives 87 positive responses.

**August 12, 1993**  
Metronome Canada Foundation registered as a non-profit corporation.

**March 15, 1994**  
The design for Metronome by Kuwabara Payne McKenna Blumberg unveiled. The design goes on to win a number of awards and is featured at an exhibition held in Barcelona, Spain by the Union of International Architects in 1995.

**September 10, 1995**  
Many music-related companies (62 of them, in all) become founding patrons of Metronome Canada.

**October 6, 1997**  
Metronome Canada Foundation's application for a 99-year lease on the Canada Malting Silo Complex is approved.

**January 11, 1999**  
A public awareness campaign is launched.

**August 20, 1999**  
The Metronome Canada Pavilion is featured at the Canadian National Exhibition in Toronto.

**July 1, 2003**  
This is the earliest construction could begin on Metronome.

**July 1, 2005**  
If ground is broken on July 1, 2003, this is when Metronome would hold its grand opening.

on music in recent years. Aside from the debate about MP3 and digital music distribution, more complex and accessible recording and mixing software applications have become available. Digital instruments are now the norm in much of the music recorded today. In some cases, music is programmed, not performed.

"The Metronome itself will be a technological hub for audio, video and telecommunications technologies," Harris said. "On top of that, part of the major exhibit, which is Canada's Music Museum, will honour and celebrate the role that Canadians have played in creating recording and broadcast technologies. So we not only intend to utilize cutting edge technologies, but we intend to celebrate the contributions Canadians have made."

While some of the complex will be specifically for businesses, all of the major exhibits are designed for the public. Harris said he expects Metronome to be a great tourist destination. ♦

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LG 52X CD-ROM, 1.44M Floppy drive  
SoundMax 2.0 with Amplified Speaker  
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256M DDR PC266 Memory  
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### Box Upgrade 2417

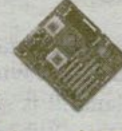
Intel® Celeron® Processor 1.0 GHz  
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**SCSI 10000 RPM, Ultra 160:**  
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Seagate ST-336706LW 36.4G \$545  
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**SCSI 15000 RPM, Ultra 160:**  
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Seagate ST-336752LW 36G \$815

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Jomage Int IDE 250M Zip drive \$119  
Panasonic 1.44M floppy drive \$16  
Seagate Int 24G DAT drive w/ tape \$1239  
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Adaptec 2906 kit / 2930U kit \$79 / 135  
Adaptec Fireconnect 4300 kit (retail) \$92  
Adaptec 29160N Ultra 160 kit (retail) \$455  
Adaptec 39160 Ultra 160 kit (retail) \$569  
Adaptec Raid 2100S 32M (retail) \$599  
Adaptec Raid 2100S 32M Kit (retail) \$689  
Adaptec Raid 3300S 32M (retail) \$1045  
Intel® Raid SR0MR \$465  
Intel® Raid SRU32 \$945  
LAVA ISA / PCI printer card \$28 / 49  
Promise Ultra ATA133 controller \$79  
Promise Fastswap Kit \$145  
Promise Fasttrak100 TX2 Raid \$159  
Promise Supertrak SX6000 Raid 5 \$449

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Celeron™ 1.0 GHz 256K \$122  
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Celeron™ 1.2 GHz 256K \$155  
Celeron™ 1.3 GHz 256K \$169  
Pentium® III 1.0 GHz 256K \$225  
Pentium® III 1.13 GHz 512K \$325  
Pentium® III 1.26 GHz 512K \$379  
Pentium® III 1.4 GHz 512K \$629

Pentium® 4 1.7 GHz 256K \$303  
Pentium® 4 1.8 GHz 256K \$349  
Pentium® 4 1.9 GHz 256K \$405  
Pentium® 4 1.6 GHz 512K \$255  
Pentium® 4 1.8 GHz 512K \$355  
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Pentium® 4 2.0 GHz 423-pin \$570

### Intel® MOTHERBOARDS

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D815EGEWUL \$175  
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D845HV Pentium® 4 \$185  
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D845WN Pentium® 4 \$195  
D845WNL Pentium® 4 \$215  
D845PT Pentium® 4 DDR \$204  
D845PTL Pentium® 4 DDR \$219  
D845BG Pentium® 4 DDR \$220  
D845BGL Pentium® 4 DDR \$240  
D850MD Pentium® 4 \$225  
D850MDL Pentium® 4 \$242  
D850MV Pentium® 4 \$235  
D850MVL Pentium® 4 \$258  
D850GB Pentium® 4 \$203  
D850GBAL Pentium® 4 \$242  
S815EBM1 Server Board \$249  
SAI2 Server Board \$645  
STL2 Server Board \$799  
SDS2 Server Board \$1050

### CASES with Power Supply

Med Tower 6 bays ATX 250W \$60  
P4 Med Tower 6 bays ATX 300W \$79  
P4 Med Tower ATX 300W with USB \$99  
AOpen Full Tower 10 bays 300W \$129  
In-Win P4 Case 300W \$102  
Rackmounts Chasis 1U 180W \$395  
Rackmounts Chasis 2U 300W \$425  
Rackmounts Chasis 4U P4 300W \$280  
ATX Power Supply 250W \$37  
ATX Power for P4 300W / 400W \$49 / 109

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Logitech Wheel Mouse PS2 \$15  
MS / AOpen 2-Button PS2 Mouse \$8  
MS Internet Keyboard \$27  
MS Wireless Desktop (KB+Mouse) \$89  
MS Wireless IntelliMouse Exp \$98

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Creative Int IDE 52X CD-Drive \$49  
LG Int IDE 52X CD-Drive \$43  
LG Int IDE 16X DVD Drive \$87  
LG Int IDE 24x10x40 w/ software \$135  
LG Int IDE 32x10x40 w/ software \$155  
LG Int IDE 12x8x32 + 8X DVD \$165  
Pioneer Int IDE DVD-RW writer (retail) \$705  
Samsung Int IDE 16X DVD Drive \$82  
Rondo EZ-CD creator V5.0 (bulk) \$18  
Blank CD-R Sony 80 min. \$1.3  
Blank CD-RW Sony 74 min. \$2.9  
Blank DVD-R / DVD-RW Sony \$20 / 33

### SOUND CARD / SPEAKER

SB 16 PCI (bulk) \$26  
SB Live Dolby Digital 5.1 (bulk) \$49  
SB Audigy w/1394 (bulk) \$96  
SB Audigy Gamer / MP3+ (retail) \$137  
SB Audigy Platinum (retail) \$269  
SB Audigy Platinum External (retail) \$335  
Altec Lansing AVS200W \$29  
Altec Lansing AVS300W 3pcs \$48  
Altec Lansing AVS500W 5pcs \$69  
Altec Lansing ATP4 5pcs \$179  
Creative Inspire 4.1 4400 \$85  
Creative Inspire 5.1 5300 \$139

### MEMORY

(Please call for the current price, or refer to our WEB site)  
SDRAM 128M, 133MHz \$72  
SDRAM 256M, 133MHz \$124  
SDRAM 512M, 133MHz \$250  
SDRAM 128M, 133MHz ECC w/ Register \$115  
SDRAM 256M, 133MHz ECC w/ Register \$195  
DDR 256M, PC266 \$165  
DDR 512M, PC266 \$305  
RAMBUS 64M 800MHz \$50  
RAMBUS 128M 800MHz \$88  
RAMBUS 256M 800MHz \$170

### SCANNERS / WEBCAM

D-Link DSB-C300 \$107  
HP ScanJet 2200C USB \$122  
HP ScanJet 4400C USB/Parallel \$153  
HP ScanJet 5470C USB/Parallel \$425  
HP ScanJet 7450C USB/SCSI \$899  
HP ScanJet 7490C USB/SCSI \$1259

### INKJET PRINTERS

HP DJ 656C USB \$99  
HP DJ 845C USB \$144  
HP DJ 940CVR USB \$235  
HP DJ 990C USB \$425  
HP DJ 1220Cxi USB/Parallel \$549  
HP CP1160 USB/Parallel \$559  
Lexmark Jetprinter Z22 USB \$80  
Lexmark Jetprinter Z33 USB \$103  
Lexmark Jetprinter Z53 USB \$163  
IEEE Bi-direction printer cable 6 ft \$15

### LASER PRINTERS

HP 1000 10 ppm 1M \$359  
HP 1200 15 ppm 8M \$579  
HP 2200D 19 ppm 8M \$1188  
HP 4100 25 ppm 16M \$1635  
HP 4550 16 ppm 64M Color \$3195  
Lexmark E210 12 ppm 4M \$299  
Lexmark E320 16 ppm 4M \$460  
Lexmark T520 20 ppm 8M \$1019  
Lexmark C720 24 ppm 32M Color \$2965  
QMS Magicolor 2200 DeskLaser \$1655

### FAX MODEMS

AOpen 56K Int V.90 w/voice PCI \$42  
AOpen 56K Ext V.90 Serial \$69  
USR 56K Int V.90 PCI HW bulk \$75  
USR 56K Ext V.92 \$139

### VIDEO CARDS

ATI TV Wonder (add-on PCI) retail 99  
ASUS V7100 Pro Pure 64M \$142  
ASUS V8200 Ti200 Pure 64M \$285  
ASUS V8200 Ti200 Deluxe 64M \$329  
ATI Xpert 2000 Pro 4X 32M \$62  
ATI Radeon 7000 SDRAM w/o 64M \$86  
ATI Radeon 7500 DDR video out 64M retail 215  
ATI Radeon 8500 DDR video out 64M retail 295  
ATI All-in-Wonder 7500 64M retail 285  
MSI GF2 MX400 64M retail 530  
MSI GF2 MX400 Pro TV-out 64M \$119  
MSI GF2 TVX200 DDR TV-out 64M \$155  
MSI GF3 Ti200 DDR VIVO 64M \$255

### MONITORS

Acer V551 15" 1024 27 \$189  
NEC AS70 17" 1280 27 \$215  
NEC AS75F 17" 1280 25 \$245  
NEC AS95F 19" 1600 25 \$375  
NEC AS125F 22" 1600 24 \$785  
NEC LCD 1550V 15" 1024 30 \$545  
NEC LCD 1700V 17" 1280 26 \$968  
NEC LCD 1850E 18" 1280 28 \$1295  
NEC LCD 2010X-P 20" 1280 31 \$3259  
Samsung 750S 17" 1280 24 \$215  
Samsung 753DF 17" 1280 20 \$259  
Samsung 955DF 19" 1600 20 \$389  
Viewsonic E70F 17" 1280 25 \$283  
Viewsonic E90 19" 1600 27 \$379  
Viewsonic G90F 19" 1600 25 \$469  
Viewsonic G810 21" 1600 25 \$859  
Viewsonic P220F 22" 1600 25 \$1140

### Software (Microsoft OEM versions must be purchased with Systems)

MS Office XP Small Business OEM \$280  
MS Office XP Professional OEM \$515  
Norton Antivirus 2002 OEM \$44  
Windows XP Professional OEM \$265

### NETWORKS

D-Link PCI 10/100 BT card \$25  
3Com 3C995 10/100 BT (bulk) \$57  
3Com 3C996 1000BT Server Adapter \$288  
3Com 3C1646 12 ports Switch \$675  
3Com 3C1646 6 ports 1000BT Switch \$1088

### Intel® Pro/100+ PCI (bulk)

Intel® Pro/100+ SEC \$57  
Intel® Pro/100+ Server \$69  
Intel® Pro/1000T Desktop \$115  
Intel® Pro/1000 Server Adapter \$155  
Intel® PCMCIA 10/100BT RealPort \$288  
Intel® Wireless Gateway \$173  
Intel® Wireless AP + 2 PCMCIA \$359  
Intel® Wireless Print Server \$1080

### Linksys BEFSR41 4 ports switch

Linksys BEFSR41 4 ports switch \$135  
Linksys BEFSR41 4 ports switch \$179  
Linksys Wireless BEFW11S4 \$275  
Linksys Wireless PCMCIA Card \$149  
Linksys Wireless USB \$151  
Linksys Wireless PCI \$145  
Linksys Wireless Print Server \$229

### Netgear FS105 5 ports Switch

Netgear FS105 5 ports Switch \$74  
Netgear FS108 8 ports Switch \$115  
Netgear FS116 16 ports Switch \$232  
Netgear 10/100BT 2 ports Print Server \$179

### 10/100 BaseT (RJ45, 8 wire) Jack

10/100 BaseT (RJ45, 8 wire) Jack \$1.5  
Ethernet Cable RG58/10/100 BT 0.22ft \$1.5  
100BT 4 / 10 / 25ft w/ Connector \$6 / 8 / 12  
RJ45 key jack module for wall plate \$5.5  
Wall plate (1/2/4/6 holes) \$2.2

### Uninterruptible Power Supply (UPS)

APC - American Power Conversion Personal 7 Outlet w/Modem \$35  
Backup-UPS 350 \$139  
Backup-UPS 500 \$195  
Backup-UPS Pro 500UC \$229  
Backup-UPS Pro 1000 \$549  
Backup-UPS Pro 1400 \$719  
Smart-UPS 700Net w/ Software \$519  
Smart-UPS 1000 USB / RS232 \$739  
Smart-UPS 1500 USB / RS232 \$965  
Smart-UPS Rackmount 2U 1000 \$879

# How to get rid of that useless CD pile responsibly

By ANDREW MOORE-CRISPIN

So what do you do with those ISP CDs that come in the mail or the "coasters" that you made when you just couldn't wait to check your e-mail while you were burning a disc?

If you're like most people, you probably throw them out almost as quickly as you get them, perhaps after a quick and potentially injurious game of Frisbee.

For the environmentally conscious consumer, having CDs end up in a landfill is simply not an option. But what can you do?

Canadian companies that recycle CDs on a consumer level are seemingly non-existent, or they at least don't have Web sites.

A recent study from RBC Financial Group, conducted by Ipsos-Reid, says that around 50 per cent of Canadian households have a PC. The study also suggests that almost half of the households with a PC also have a CD burner.

That, combined with the multitude of software on CD, which eventually becomes redundant, makes for a lot of CDs sitting in landfill.

Sony uses ultrasonic waves and solvents to remove and recover the gold and dyes that make CD-R discs recordable, for reuse. The polycarbonate that the actual disc is made of is also reclaimed, but the process is apparently only used in the Japanese plant in the event of a quality issue.

Dave Kundapur, continuous improvement manager with Sony Music Canada says that if a CD on the line is flawed, it is sent out for secure disposal and recycling.

Kundapur says once the aluminum present in pressed CDs is removed, the polycarbonate "can be reused in headlights, taillights and other applications where colour is not important." However, because of the high optical quality standards for CD manufacturing, the recovered materials aren't reused by Sony Music to make CDs.

Pilot projects are going on in the States, but it might be a while before they are widely available, Kundapur said.

He also says Sony is working toward "cradle-to-grave" manufacturing, where products are taken back to the factory when finished their useful life, and materials are reused and recycled.

Some American companies will recycle CDs on the consumer level, but ship-

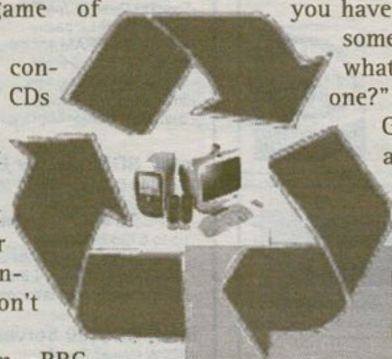
ping costs will be your responsibility.

GreenDisk is one such company. GreenDisk president and founder David Beschen says they will accept all forms of electronic media for recycling, from floppies to CD and DVD discs from companies or consumers.

Beschen says GreenDisk fills a niche that is largely unexplored.

"If you want to recycle, that's great if you have a million pounds of something," he said, "but what if you only have one?"

GreenDisk will accept any quantity of CDs to be recycled.



## Everything old is gold again

By HAROLD LASS

Until recently I had a 386, a keyboard and some single density 3.5 inch drives stashed in the basement. What are you still hanging on to? According to Silicon Valley Toxics Coalition, what you're really stockpiling is a heap of heavy metals — including lead, mercury, hexavalent chromium, cadmium and brominated flame retardants — all highly toxic to the environment, wildlife and human health if mismanaged. So, how can you safely manage that ancient four-year-old pile of technology?

First, here's what not to do — don't ever bag your unwanted computer and peripherals and put the works out for garbage on the curb. We don't need to contribute more toxic trash to landfills. Environment Canada estimates that in 2005, approximately 12,000 tonnes of computer waste will be generated in Toronto, of which 7,000 tonnes will be suitable for reuse or recycling. It's up to us to contribute to the 7,000 tonnes.

And there's a safe way to do it. Toronto, and most other municipalities, is equipped to dispose of your unwanted high tech write-offs. For Toronto computer recycling drop-off locations and times, visit the Toronto Recycling Web site. They'll consign your computer to hex heaven in an environmentally friendly way. And if you have any exhausted laser printer toner cartridges, call LaserNetworks (416-363-7404) for pickup.

### Give it away

But what's old to you may be gold to someone else. Why not donate your

GreenDisk started as a service for software companies concerned for their intellectual property when getting rid of overstock or redundant software, and branched out into accepting recyclable media from the consumer level as well. Magnetic media like floppy disks are degaussed and re-sold under the GreenDisk label, and optical media is chipped up and shipped out to companies that de-metalize and recover the polycarbonate for use in the automobile, appliance and computer industry.

GreenDisk also sells CD-R media in Canada and the U.S. The disc itself is not made from recycled materials, but the jewel case and other packaging is.

tired piece of technology to others who'll appreciate it? Not everyone needs hefty amounts of hard drive space or high speed processors. For word processing, for example, even a PC 8086, Commodore or PET antique will do just fine. These folks would love to hear from you:

- Computers for Schools is looking for organizations or individuals to donate to this program. It's Canada-wide and they'll see to it that your computer will find its way to a school where it will be put to use.

- U of T SwapShop will pick up your computer if it's reusable and give it a new home.

- reBOOT Canada will also pick up your computer (\$25 charge) or you can drop it off and they'll rebuild it and redistribute it to a charitable organization in your community. They'll even issue you a tax receipt for the market value of the donated equipment they accept.

- Possibilities Project wants Macs and PCs, no matter how old.

### Cash it in

As admirable as recycling or donating may be, why not try to recoup some of the big bucks you laid out in the first place for that must have computer? Here's how:

- eBay Canada — There's probably someone out there willing to bid on your once precious Pentium. Computers are hot items on eBay. Many go for around \$300 including the monitor.

- Beyond the Bluebox — Enter "computers" in the search field of this terrific city of Toronto search engine for a

"As I'm fond of saying, 'if you're not buying recycled, you're not really recycling,'" Beschen said.

Scientists are at work trying to figure out a way to recover polycarbonate of a high enough quality to be remade into optical media discs, Beschen said. "It has to reach a certain level (of optical quality) or it won't be used."

CD-ROMs and DVDs have to be of the highest optical quality, Beschen says, but music CDs might be more forgiving.

Last year, GreenDisk diverted 20 million units from landfill, "but in our peak, we did about 60 million," he said.

GreenDisk can be contacted through their Web site, [www.greendisk.com](http://www.greendisk.com). ♦

lengthy list of local area businesses that will most likely give you cash for your computer or components. And if they can't, they'll take it off your hands.

- PCUsed — They buy and sell used computers and will even take a trade-in if you're moving up in quality.

- CPUUsed — For all you Mac owners.

- CanadaSEEK.com — Once you've registered with them, you can post a sales listing of your own.

That ought to be enough to get you started on your recycle quest. Just remember, though, that there are better uses for neglected computers than holding open doors or waiting on curbs for trash pickup. That just doesn't compute. ♦

## more INFO

Beyond the Bluebox  
[www.city.toronto.on.ca/beyondblue/index.htm](http://www.city.toronto.on.ca/beyondblue/index.htm)  
CanadaSEEK.com  
[www.canadaseek.com/Computers/Computers/index.php](http://www.canadaseek.com/Computers/Computers/index.php)  
Computers for Schools  
[www.schoolnet.ca/cfs\\_opc](http://www.schoolnet.ca/cfs_opc)  
CPUUsed  
[www.cpused.com](http://www.cpused.com)  
eBay Canada  
[www.ebay.ca](http://www.ebay.ca)  
euro.recycle.net  
[euro.recycle.net/a/view/3020.html](http://euro.recycle.net/a/view/3020.html)  
PCUsed  
[www.pcused.com/](http://www.pcused.com/)  
Possibilities Project  
[www.possibilitiesproject.com/features/year1/sep1999/computers.html](http://www.possibilitiesproject.com/features/year1/sep1999/computers.html)  
reBOOT Canada  
[www.reboot.on.ca/](http://www.reboot.on.ca/)  
Toronto Recycling  
[www.city.toronto.on.ca/garbage/index.htm](http://www.city.toronto.on.ca/garbage/index.htm)  
U of T SwapShop  
[www.facilities.utoronto.ca/bldggrou/waste-man/blgrwast.htm#Computers](http://www.facilities.utoronto.ca/bldggrou/waste-man/blgrwast.htm#Computers)



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40GB Ultra-100 EIDE	\$134.83
60GB Ultra-100 EIDE	\$169.83
80GB Ultra-100 EIDE	\$229.83
120GB Ultra-100 EIDE	\$349.83
160GB Ultra-100 EIDE	\$439.83

7200RPM UDMA100	
20GB Ultra-100 EIDE	\$129.83
40GB Ultra-100 EIDE	\$154.83
60GB Ultra-100 EIDE	\$199.83
80GB Ultra-100 EIDE	\$269.83
100GB Ultra-100 EIDE	\$319.83
120GB Ultra-100 EIDE	\$359.83

9.1GB U2W 7200RPM	\$279.83
9.1GB U2W 10000RPM	\$299.83
18.2GB U2W 7200RPM	\$319.83
18.2GB U2W 10000RPM	\$349.83
36GB U2W 10000RPM	\$559.83

### Motherboards

ASUS:	
P4S 333 Socket 478 AGP Intel i845 DDR	\$189.83
P4B, Socket 478, AGP Intel i845 3 Dimm	\$209.83
P4B, 266Socket 478, AGP Intel i845 DDR	\$289.83
P4T-E Socket 478 Intel i850 4 Rimm	\$259.83
A7V-E, Socket A, AGP Via KT133	\$119.83
A7A266, Socket A, ALI UMDA100	\$179.83
A7M266, Socket A, AMD761 DDR	\$199.83
A7N266, Socket A, NVIDIA GeForce 420 DDR	\$279.83
A7V266-E, Socket A, Via KT266 DDR	\$249.83

ABIT:	
KGT-RAID, Socket A, AMD761 DDR w/raid	\$224.99
KRT7A, Socket A, KT266A DDR	\$224.99
KRT7A-RAID, Socket A, KT266A DDR w/raid	\$269.99
BL7, Socket 478, Intel i845 SDRAM	\$199.99
BL7-RAID, Socket 478, Intel i845 SDRAM w/raid	\$219.99
BD7-RAID, Socket 478, Intel i845 DDR w/raid	\$244.99
TH71-RAID, Socket 478, Intel i850 w/raid	\$274.83

EC:	
KT35A 266 FSB AT100	\$109.83
KT5EM 266 FSB DDR NIC	\$119.83
P4 55A 5478 DDR LAN	\$149.83

### Modems & Routers

Acet:	
A-Open 56K V.90 PCI Voice/Fax Modem	\$29.83
A-Open 56K V.90 ISA Voice/Fax Hdw Modem	\$69.83
A-Open 56K V.90 External Voice/Fax Modem	\$99.83

USRobotics:	
56K V.90 PCI Voice/Fax/HARDWARE Modem	\$89.83
56K V.90 External Fax/Data Modem	\$139.83
56K V.90 External Voice/Fax Modem	\$239.83

Linksys:	
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- 20GB UDMA100 Hard Drive
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- 104 Keyboard & Mouse
- 52X Int CD-ROM Drive
- 16 Bit Stereo Sound
- 120 Watt Amplified Speakers
- 56K V.90 Voice/Fax Modem
- 10/100 Network Card

Intel Pentium 4 - 1.6Ghz	\$729.83	or	\$21/month
Intel Pentium 4 - 1.8Ghz	\$829.83	or	\$23/month
Intel Pentium 4 - 2 Ghz	\$1029.83	or	\$21/month

### Edge PC 2000

- Elegant Mid Tower ATX Case
- 256 MB PC 266MHz DDR RAM
- 40 GB UDMA133 Hard Drive
- N-Video GeForce2 64MB AGP Video Card
- 104 Keyboard & Mouse
- 52X Int EIDE CD-ROM Drive
- 16 Bit Stereo Sound
- 120 Watt Stereo Speakers
- 56K V.90 Voice/Fax Modem
- 10/100 Network Card

AMD XP 1700 Plus	\$859.83	or	\$26/month
AMD XP 1800 Plus	\$899.83	or	\$27/month
AMD XP 1900 Plus	\$999.83	or	\$28/month
Intel P4 - 1.6Ghz	\$899.83	or	\$30/month
Intel P4 - 1.8Ghz	\$999.83	or	\$30/month

### Edge PC 3000

- Elegant Mid Tower ATX Case
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- 104Key Keyboard & Mouse
- 16X EIDE-DVD Drive
- Soundblaster AUDIGY 5.1 Sound Card
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- 56K V.90 PCI Voice/Fax Modem
- 10/100 Network Card

Intel Pentium 4 1.8 Ghz	\$1299.83	or	\$37/month
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GeForce 2 MX 400 64MB SDRAM AGP w/TV Out	\$139.83
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GeForce3 TI200 64MB DDR w/TV Out	\$289.83

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LinkSys PCMCIA 10/100 NIC	\$79.83
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Dlink DWL-650 Wireless PCMCIA 11MB	\$139.83
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# Making music from a Net connection

By HAROLD LASS

When I first picked up a banjo, home computers, much less the Internet, didn't exist. But now that both do, the Net's the first place you should head to unleash your musical muse.

First, the basics. You need an instrument and you have several choices — new, used or rental. The best place to start if you want to buy is eBay. You'll find lots to choose from, and since many of them are unwanted cast-offs, the prices are good.

Musicians Buy Line sells (or trades) everything from amplifiers and band instruments to violins and woodwinds. And most of it is pre-owned, so the prices are reasonable. Since many of the sellers are in the U.S., you'll need to convert to Canadian dollars (use The Full Universal Currency Converter) to know what the bottom line is.

For a list of Internet links to Canadian used and new musical instruments retailers, Clever Joe's Musician's Resource Centre is the place to go.

Don't let the name "pawnbroker" scare you off. Richmond's Trading Post on the

Net buys, sells and trades all types of musical instruments from cutting edge to vintage. They have a large selection and a full range of prices and quality.

Of course, the classifieds are sometimes a rich source of used musical instruments. Toronto's Classifieds.com has a selection every now and then. Super Shopper Classifieds also lists instruments for sale or trade.

Don't forget the rent-to-own option. It's not a bad idea if you're not sure this is a long term commitment. Gary Armstrong Woodwinds is one of a number of places that offer this opportunity. Once you've become a musical instrument owner, the next step is to squeeze notes out of it that sound reasonably close to pleasant.

Always wanted to play the piano? Simple. If you've got a piano or keyboard gathering dust, head over to Piano Lessons Unlimited and they'll show you how rhythmic patterns and chords can unlock the keys instantly. They compare their technique to playing the guitar. Very few casual guitar players read music. They play chords in combination with basic rhythms. Same

for the casual pianist. Their online demo claims to have you playing in one day. Of course, for the full exposure to their approach, there's a fee.

Media Guitar Method produces a series of professionally endorsed CD guitar tutorials. Their *eMedia Guitar Method 1* is packed with chord strumming, playing melodies and fingerpicking, and includes songs from Bob Dylan, The Grateful Dead and Steve Miller. The CDs come with a 30-day money back guarantee, which makes them a pretty safe venture. The prices are in U.S. dollars.

How about "live music lessons from your home, when you want with the teacher of your choice." So says the OnlineConservatory. All you need is a MIDI-compatible keyboard and a connection to the Net. You can even sign up for a free trial lesson — no obligation.

There's a health benefit to all of this musicianship, by the way. Aside from the pleasure your playing may give you (and others, hopefully), a Toronto group of researchers has set about in a longitudinal study to demonstrate that "childhood musical training may protect

the brain against dementia in old age." See that! Because I really do play the five string banjo, definitely not professionally, I'm not demented — yet. ♦

## more INFO

Childhood Musical Training...  
[ca.news.yahoo.com/020113/6/h0qa.html](http://ca.news.yahoo.com/020113/6/h0qa.html)  
 Clever Joe's Musician's Resource Centre  
[www.cleverjoe.com/index.html](http://www.cleverjoe.com/index.html)  
 eBay  
[www.ebay.ca/index.html](http://www.ebay.ca/index.html)  
 Gary Armstrong Woodwinds  
[www.garyarmstrong.com/](http://www.garyarmstrong.com/)  
 Long & McQuade  
[www.long.mcquade.com/](http://www.long.mcquade.com/)  
 Media Guitar Method  
[www.emedia.org/products.html](http://www.emedia.org/products.html)  
 Musicians Buy Line  
[www.musiciansbuyline.com/](http://www.musiciansbuyline.com/)  
 OnlineConservatory  
[www.onlineconservatory.com/](http://www.onlineconservatory.com/)  
 Piano Lessons Unlimited  
[www.playplanotoday.com/](http://www.playplanotoday.com/)  
 Richmond's Trading Post on the Net  
[www.richmondstradingpost.on.ca/](http://www.richmondstradingpost.on.ca/)  
 Super Shopper Classifieds  
[www.supershopper.com/ads/176.html](http://www.supershopper.com/ads/176.html)  
 The Full Universal Currency Converter  
[www.xe.net/ucc/full.shtml](http://www.xe.net/ucc/full.shtml)  
 Toronto's Classifieds.com  
[www.torontosclassifieds.com/merchandise/index.asp](http://www.torontosclassifieds.com/merchandise/index.asp)

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KEYBOARD & MOUSE BY HP  
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\$569.99

### NAME BRAND (OEM) INTEL 1Ghz

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### hp HEWLETT PACKARD

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### hp HEWLETT PACKARD

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# Tested: SiPix Pocket Printer



By KEVIN LINFIELD

Wouldn't it be nice to be able to print away from the home or office? If you have a notebook, Palm PDA or a PocketPC, then you might want to take a look at SiPix's Pocket Printer A6 (www.sipix.com). This tiny mobile printer has built-in infrared (IR) and serial ports, making printing from today's portable computers extremely easy.

## Small in every way

The Pocket Printer is powered by either 4 AA batteries or the included AC adapter, and prints on roll or sheet thermal A6 paper. Note that this is not a letter-sized printer. A6 paper measures 10.5x14.8 cm, which is roughly one-quarter of a regular sheet of paper. This is its major limitation, and the price you pay for portability.

This 250-g thermal printer has a 400x400 dpi resolution and a claimed speed of two pages per minute. A set of alkaline batteries should last up to 50 pages, and it has a built-in NiCad battery charger.

I am using this printer with my Palm IIIc via the IR port and my old 486 notebook via the serial cable. It is small, easy to use and highly portable.

## Limitations

Many people will find the limitations of A6 paper to be a pain. Plus, you cannot simultaneously load sheet and roll paper, and switching between the two is not always convenient. The A6 roll paper curls badly, especially near the end of the roll. Under the Palm OS, the freeware device driver from SiPix only prints from the main five Palm applications (Date Book, Address, To Do List, Memo Pad and Mail), although third-party software such as *PrintBoy* and *PalmPrint* will allow printing from other applications. Note that under PC Windows you can print from any application.

The SiPix Pocket Printer A6 retails for US\$99, while A6 paper is about US\$7 for either three rolls or 100 sheets. A list of retailers is available from [www.sipix.com/reseller.shtml](http://www.sipix.com/reseller.shtml). ♦

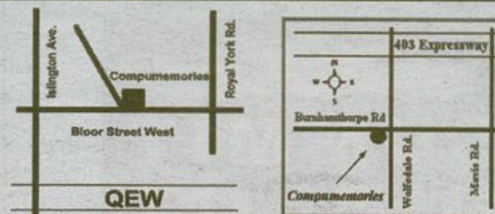
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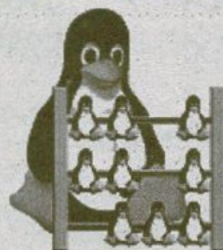
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# Barricade provides, protects broadband networks

By KEVIN LINFIELD

If you want to use your high speed Internet access with more than one computer, I'd recommend taking a look at SMC's Barricade 7004ABR. Like many computer users, I use a high speed broadband connection to access the Internet. Also like many others, I now have two computers at home. Whether you have one machine for the kids and a different one for work, or even if you run a small home-based business, sharing your access can be a real boon. After looking into various sharing solutions, I decided to go with the SMC Barricade.

## Features

SMC promotes the Barricade as an "all-in-one networking solution for home and small-business users." This broadband router (with built-in switch) features four ports and auto-senses whether your network is 10 or 100 Mbps. It has a built-in firewall, a four-port hub, a parallel port print server

and an RS-232 COM port (for fail-over dial-up or modem connections). It is totally platform independent: Whether you run Windows, Mac, Linux, xBSD or Unix, all you require is a graphical Web browser to configure and monitor your connection. All standard Internet connections are supported, including xDSL, cable modem, ISDN and even dial-up via modem (which can also be used for fail-safe backup connections). Although the Barricade features four ports, it supports up to 253 computers when used with additional hubs.

## Setup

I found the Barricade quite easy to set up and get working under both Linux and Windows. Using Netscape Navigator, I configured the Barricade to connect to my ISP. I entered my user name and password, and then told it to obtain all network parameters from my ISP. Next, I had to configure both Windows and Linux to work with TCP/IP networking and search for a DHCP (Dynamic Host Control Protocol)

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- 32bit integrated sound
- Ethernet Card
- Mid Tower P4 case
- Logitech internet keyboard
- Logitech Optical mouse
- AOpen wheel Mouse
- 3Pc. Spk w/Sub
- 30 Days free internet

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- 256MB PC133 SDRAM
- ECS P4SSA Motherboard
- 40Gb ATA100 HD
- Panasonic 1.44 Floppy
- LG 24x10x40x CDRW
- Nvidia TNT2 32M AGP
- 32bit integrated sound
- Integrated Ethernet card
- Mid Tower ATX P4
- Windows 98 Keyboard
- AOpen wheel Mouse
- 2Pc. speaker
- 30 Days free internet

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NOTEBOOKS

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- 8X DVD-ROM+8x24
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- 10/100BaseT NIC
- 1.44 Floppy USB
- 6X DVD+CDRW
- Microsoft Windows XP
- Norton anti-virus 2002
- \$150 Mail in Rebate



\$1999

## Acer 621tix-h

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- 256MB PC133 SDRAM
- 20Gb Hard Drive
- 14.1" TFT LCD 1024x768
- 56K V.90 Modem
- 10/100BaseT NIC
- 1.44 Floppy USB
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Asus V7700 TMV Geforce 64Mb 195

Asus V8200 TI 200 64M DDR 249

Asus V7100Pro GF2MX400 64M 129

ATI Xpert 98 8M AGP 49

ATI Xpert 2000 PRO 32M AGP 65

ATI D7 Wonder Retail 75

ATI Radeon VE 32M DDR 129

ATI Radeon 7000 64M Tv/out 169

ATI Radeon 7500 64M DDR 169

ATI Radeon 8500 64M DDR 259

ATI All-in-Wonder Radeon 7500 265

Nvidia TNT2 32M M64 AGP 75

Nvidia GeForce2MX200 32M 65

Nvidia GeForce2MX400 64M 95

Nvidia GeForce4MX440 64MDDR 169

MSI Geforce4 Mx440 64M DDR 179

MSI Geforce2 Ti 64M DDR Tv/out 165

MSI Geforce2 MX400 64M w/tv 115

MSI Geforce3 1200 64M Tv/out 239

## Sound Cards

Creative Labs SB 128 35

Creative Labs SB Live! 5.1 55

Creative Labs SB Audigy Mp3 145

Crystal 32bit PCI 19

## Monitors

Samsung 17" 750S 27DP 205

Samsung 17" 753DF 20HP Flat 235

Samsung 17" 700NF 25AG Flat 349

Samsung 17" 955DF 20HP Flat 359

Samsung 17" 900NF 25AG Flat 549

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Altec Lansing AVS500 5 Pcs \$69

Altec Lansing AVS300 w/ Sub 50

Altec Lansing ATP3 3 Pc. w/Sub 89

Altec Lansing ACS54 5 Pc. w/Sub 85

Creative Labs Inspire 2400 59

Creative Labs Inspire 4400 85

Creative Labs DT2500 Digital 375

Logitech SR-30 65

Logitech Soundman DSR-100 159

Logitech 2540 99

## Motherboards

Abit KT7A-Raid SocketA ata133 275

Abit TH7-II Socket478 Raidram 285

Asus TUSL2-C PCPGA, Intel815e 159

Asus TUV4X-E, 370 VIA694x 135

Asus P4T-E Intel 850 P4 259

Asus A7A266 Socket A 249

Asus P4B266 Socket478 Raid 185

Asus P4S333 Socket478 SD/DDR 169

Asus A7N266 SocketA DDR 279

Asus V7266-E SocketA Raid 249

## Hard Drives

Maxtor 20Gb IDE U100 329

Western Digital 100G IDE U100 329

Maxtor 40Gb IDE U100 329

IBM 60Gb IDE, 7200RPM U100 329

IBM 120Gb IDE 7200RPM U100 449

Maxtor 20Gb, 7200RPM U100 329

Maxtor 40Gb, 7200RPM U100 329

Maxtor 60Gb, 7200RPM U133 329

Maxtor 80Gb 7200RPM 329

Quantum AS 20Gb, 7200RPM 329

Quantum AS 40Gb, 7200RPM 329

## CD/DVD-ROMs

AOpen 52X CD-ROM IDE 45

Creative Labs 52X CD-ROM IDE 45

Pioneer 16X DVD-ROM IDE 89

LG 16X DVD-ROM IDE 89

Toshiba 16X DVD-ROM IDE 89

Liteon 16X DVD-ROM IDE 89

Samsung 16X DVD-ROM 89

## CD Recorders

AOpen 24x10x40x IDE JustLink 139

## LG 24x10x40x IDE w/Software

125

Panasonic 24x10x40x w/Soft 145

Panasonic 24x10x40x IDE Retail Box 269

## Networking

AOpen ALN-325 10/100BT PCI 23

D-Link DWL-120 Wireless USB 145

D-Link DWL-650 Wireless PCmcia135

D-Link DWL-520 Wireless PCI 155

D-Link D-713 Wireless router Print335

D-Link DWL-1000 wireless A.P. 245

D-Link 538TX 10/100BT PCI 25

D-Link DSS-5 8 Port 10/100 Hub 75

Surecom 8 Port 10BT Hub 39

Surecom 5 Port 10/100BT Hub 59

Surecom 8 Port 10/100BT Hub 75

Linksys 4 Port cable router 139

Linksys 8 Port cable Router 265

Linksys 4 Port VPN Router 249

Linksys Wireless router w/4port 279

## Modems

AOpen SV 56k V.90/Voice PCI 25

AOpen PM 56k V.90/Voice PCI 45

Smartlink 56k V.90 Voice PCI 23

USRobotics 56k V.90 HW PCI 79

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Brother 1230 Laser Printer 2M 315

Epson C60 Inkjet Printer 69

Epson C60 Inkjet Printer 145

HP Laserjet 1000 370

Samsung ML-1250 Laser 8M 329

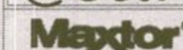
## Notebook Upgrade

128M SODIMM ram 79

256M SODIMM ram 125

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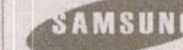
40G 7200 RPM HARD DISK \$129  
7200 RPM, ATA133, 2Megabyte Cache Memory



LG Electronics  
LG CD-REWRITER DRIVE \$125  
24xWrite, 10xRewrite, 40xRead, 8Mb Buffer Memory



SAMSUNG 19" FLAT 955DF \$359  
Flat Monitor, 1600 x 1280 Max. Resolution, 0.20mm HDPI



LOGITECH CORDLESS FREEDOM \$129  
Cordless Keyboard & Cordless Optical Mouse, Silver Black



Logitech  
Cordless Keyboard & Cordless Optical Mouse, Silver Black



Logitech  
Cordless Keyboard & Cordless Optical Mouse, Silver Black



server.  
Total  
time:  
Less

than 15 minutes from the time I opened the box. Hardware requirements are not anything different than what you needed to connect to your ISP. Each computer requires an Ethernet card with an RJ-45 cable, and your Internet connection (xDSL or cable modem) attaches to the rear of the Barricade. I moved my inkjet printer to the Barricade's print server to make it easy to print from both Linux and Windows. Under Linux, I just used the "printconf" utility to configure a network printer, and under Windows I used the Barricade's CD-ROM to install drivers, and then configured my inkjet as a network printer. Both operating systems have no problems printing, although the Barricade's print server communicates only one way, so my special Windows print software, which allows me to check the level of ink, no longer works. Note that you should immediately upgrade the router's firmware to the latest version to ensure all known bugs are fixed. The default version 1.0 had a few minor issues, but the current version 1.4 appears to have fixed all of the issues I had. Upgrading the firmware is performed with your Web browser after downloading the latest driver from SMC's Web site.

#### Usage

Daily usage with the Barricade has proven to be a joy. I'm happy to have a strong firewall protecting my computers against hackers and other unauthorized users (since they are on 24/7) and using the print server made sharing my inkjet easy. The negatives include poor logging capabilities, no ability to notify me if problems arise and the Web-based online help is minimal (although the printed and PDF manuals are quite good).

#### Package

The package retails for \$139.99 and includes the Barricade router (measuring 18x10x3 cm), a power adapter, a 35-page Quick Installation Guide, a 112-page Users' Guide, an installation CD (for setting up the print server under Windows) and one Category 5 Fast Ethernet cable. More information on this product can be found online at [www.smc.com](http://www.smc.com).

**more INFO**

Barricade 7004ABR  
\$139.99  
SMC Networks  
[www.smc.com](http://www.smc.com)

REVIEWS

**Mustek Plug N Scan**  
USB 1200 ub

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**Alttec Lansing**  
ACS21

**\$15.99**

**56k V90 Diamond / GVC**  
Modem

**\$19.99**

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**\$59-**

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128MB SDRAM, 100 ZIP

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56K MODEM

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90DAY WARRANTY

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VIDEO CARD  
SOUND & SPEAKERS  
PS/2 104 KEYS  
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INTEL BP810 MOTHER BOARD  
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CDROM DRIVE  
1.44 MB FLOPPY  
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KB PS/2 MOUSE  
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VARIOUS CONFIGURATIONS

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SOUND CARD OB  
SPEAKERS 3 PIECE  
56K V90 FAX MODEM  
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128 TO 256MB RAMBUS (UPGRADE)	\$65
40GB TO 40GB 7200RPM (UPGRADE)	\$50
CDROM TO 16X DVD-ROM (UPGRADE)	\$40
24X10X32 LG CDRW (Add)	\$135
SB LIVE 5.1 (UPGRADE)	\$50
17" KDS MONITOR (Add)	\$210
19" CTX VS-190I MONITOR (Add)	\$325
19" VIEWSONIC PF790 MONITOR (Add)	\$560
AVS 500W 5PCS. SPEAKERS (UPGRADE)	\$60
WINDOWS MILLENNIUM (Add)	\$109
WINDOWS 2000 PRO (Add)	\$215
WINDOWS XP-HOME (Add)	\$150
WINDOWS XP-PRO (Add)	\$225
COREL OFFICE 2000 (Add)	\$19

#### Green Line Systems

**AMD ATHLON K7-950 GHZ**

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ATX MID TOWER  
128MB SDRAM \*  
20GB HARD DRIVE  
1.44MB FLOPPY  
32MB ATI VIDEO  
52X CDROM  
SOUND CARD OB  
SPEAKERS 3 PIECE  
56K V90 FAX MODEM  
PS/2 104KEYS KB PS/2 MOUSE  
\*FOR 128DDR ADD \$10.00

#### Upgrade

K7- 1.0 \$615.00  
K7- 1.4 \$700.00

**\$575.00**

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#### Gold Line Business

**PENTIUM 4 1.5 GHZ CPU**

TYAN S 2090 MOTHER BOARD 478  
ATX P4 MID TOWER 300W PS  
128MB SDRAM MEMORY  
40GB UDMA100 HARD DRIVE  
1.44MB FLOPPY DISK DRIVE  
32MB ATI VIDEO  
52X LG CDROM DRIVE  
32BIT SOUND CARD  
56K V.90 PCI FAX MODEM  
3PCS. SPEAKERS W/SUB  
PS/2 104KEYS KEYBOARD  
PS/2 MOUSE

#### Upgrade

P4- 1.7 \$799.00  
P4- 1.8 \$869.00  
P4- 2.0 \$1149.00

**\$749.00**

#### XP Systems

**AMD XP 1.6 GHZ**

MSI K7T TURBO 2 MOTHERBOARD  
ATX MID TOWER  
128MB SDRAM  
20GB HARD DRIVE  
1.44MB FLOPPY  
32MB ATI VIDEO  
52X CDROM  
SOUND CARD OB  
SPEAKERS 3 PIECE  
56K V90 FAX MODEM  
PS/2 104KEYS KB PS/2 MOUSE  
INTEGRATED SOUND

#### Upgrade

XP- 1.8 \$739.00  
XP- 1.9 \$875.00  
XP- 2.0 \$899.00

**\$699.00**

ONE YEAR LIMITED WARRANTY

#### Red Line Gaming

**PENTIUM 4 1.6 GHZ CPU**

INTEL D850GB PC-400 MOTHER BOARD 423  
ATX P4 MID TOWER 300W PS  
256MB PC-800 RDRAM MEMORY  
40GB UDMA100 HARD DRIVE  
1.44MB FLOPPY DISK DRIVE  
32MB ATI VIDEO  
16X DVD-CDROM DRIVE  
SOUND BLASTER LIVE 5.1  
56K V.90 PCI FAX MODEM  
ALTEC LANSING 5 PIECE SPEAKERS  
PS/2 MULTIMEDIA KEYBOARD  
PS/2 LOGITECH WHEEL MOUSE  
NON-INTEGRATED VIDEO AND SOUND

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P4- 1.8 \$1249.00  
P4- 2.0 \$1599.00

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# Digital Shots: Imaging software for you

By CHRIS TALBOT

Photography can be a fun and rewarding hobby, but getting out in the field and shooting with your digital or 35mm camera until your heart is content is only half of the fun. Most amateur photographers' work ends when they drop a roll of film off to be developed or when they transfer images from their digital cameras to their hard drives (or, better yet, to a backup medium like CD-R).

No matter whether you shoot film or digital, however, there is much more you can do with your images after the shooting ends – and it requires you to have imaging software. All digital cameras on the market come packaged with software to get images from the camera to the hard drive, but they also have software that allows users to do some basic manipulation of the images – resizing, lightening, darkening, cropping and changing the image's resolution.

Many digital camera manufacturers have made deals with major producers of imaging software that allow them to bundle limited or full versions of software from companies like ArcSoft or ACD with their cameras. Whether it's basic image editing software or something more complex, the average digital photographer will find everything needed bundled with purchased cameras.

Those who want to get more from their hobby can use the software sold with digital cameras as a starting point, but software on the higher end of the spectrum might be in order – and there are a lot of packages out there (too many to cover in only one column). If you are shooting on a film camera,

you'll need to purchase a scanner before you can start manipulating photographs on your computer.

## Three popular options

*Paint Shop Pro 7* by Jasc Software is a powerful application designed and priced for the consumer. Currently selling for a suggested retail price of \$149.99, *Paint Shop Pro* can be found at most computer software stores. The most recent version of the software, *Paint Shop Pro 7 Anniversary Edition* (marking the software's first decade), was released last year (see review in *Toronto Computes!* November 2001 issue, archived at [www.canadacomputes.com](http://www.canadacomputes.com)).

The software allows users to modify the size, scale and resolution of the image, change it from RGB (red, green, blue) colour mode to greyscale (black-and-white), add textures and effects, insert text and crop the image, among other things. What I really like about *Paint Shop Pro* is the ease of use and the number of effects that are included in the software. Users can add lighting effects, sunbursts, make the image look like it was clipped out of an old newspaper or change the outlining shape of the image to, say, a pentagon (excellent for creating the impression of a framed image).

In the past, I've used *Paint Shop Pro* mainly for designing images for Web sites, which it handles superbly. There are tools included that will help Web masters slice up images so each slice can be used as a separate hyperlink on Web sites. At one time, this was a time-consuming and frustrating process.

The printed manual included with the software explains how to use *Paint*

*Shop Pro* and how to get the most out of the tools available. Written so a beginner can read and understand it, the manual also defines key terms used in digital imaging, such as TIFF (tagged image file format), TWAIN (an industry standard for devices to communicate with imaging software) and AVI (audio video interlaced).

On the high end of imaging software is *Photoshop 6.0* from Adobe Systems, which makes a good claim for being the top producer of imaging software. Unfortunately, *Photoshop's* price is far out of range for the average consumer. Aimed at the professional imaging crowd, *Photoshop* has a price tag of \$999.99.

The learning curve for *Photoshop* is significantly higher than for consumer software packages, but the power behind the software itself is difficult to compete with. *Photoshop* allows users to modify images on the smallest scale. It comes complete with a variety of tools, palettes and effects that give users the ability to optimize images for the Web, change colour modes to and from RGB, CMYK (cyan, magenta, yellow, black) and greyscale, lighten, darken, crop and otherwise modify pictures.

For the consumer, Adobe released *Photoshop Elements* last year. Essentially, *Photoshop Elements* is a scaled down version of *Photoshop 6.0*. Most of the tools are present and accounted for, but the ability to work in CMYK colour mode has been taken out.



Unless you are doing work that will be printed in CMYK (professional printers use CMYK), *Elements* should be sufficient for your needs. The suggested retail price is \$149.99.

## Something to look forward to

In February, Adobe announced that *Photoshop 7.0* will be

released in April. During a demonstration of a beta version of the software, an Adobe spokesperson showed how the new *Photoshop* has been improved. Many of the enhancements are not for everybody, but for people who want to retouch photographs, these tools could save hundreds of hours.

The healing brush is the most exciting of the new tools. Similar to the cloning tool, the healing brush can paint colours over top of surfaces but will not lose the texture. For example, it will allow users to edit out wrinkles on a person's face (this was shown during the demonstration).

The natural media paintbrush allows users to work with digital re-creations of chalk, pastel and other media that haven't had satisfactory results in imaging software to date. Colour correction is a snap with the new auto correction tool. Faded photographs can be scanned in and made to look like new again with a few simple mouse clicks.

Adobe has also made the menus more intuitive and easier to understand for first-time users. ♦

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# Portability possibilities for your data

By HAROLD LASS

Who says you can't take it with you? With these removable media, you can.

## Diskettes

By now, you've probably experienced the agony of lost data not backed up, as well as the thrill of restoring precious data you did back up — and usually in that order. If ever there was a compelling reason for the use of removable media, that's it. The simplest, cheapest and most readily available removable media is the ubiquitous 3.5-inch diskette. With it you can store data for safety or for use on another computer.

But what if a file you need to copy to diskette is larger than 1.44 MB, the maximum storage capacity of a high density diskette? Well, you can "stretch" the capacity from 1.44 to 1.7 MB with the use of a handy utility, *MaxiDisk*. Problem is, with the size of files these days, even 1.7 MB may fall short. You can, of course, zip your data with *WinZip* and even span multiple floppies if the zipped data still is larger than the capacity of one diskette, stretched or not.

Let's face it, though. Who wants to

haul a stack of stored data with us wherever we go? There are better ways.

## Zip and Jaz

The Zip drive, a popular alternative to the 1.44 MB floppy, increases the storage capacity of those diminutive disks to 100 MB and 250 MB — quite an improvement. Think that's a lot? Iomega also makes a Jaz drive that holds 1 GB and 2 GB of data. Now that's a lot. Like all specialty storage systems, they involve special hardware and diskettes. These drives range in price from \$112 to \$240 — a relatively inexpensive way to hold a lot. But let's crank the storage dial up another notch.

## CD/DVD burners

CD storage is rapidly becoming the preferred movable media and for good reason. CD "burners" — a misnomer, by the way — have plummeted in price. But more important is their storage capacity — around 800 MB. Unlike floppy diskettes, which are coated with iron oxide, conventional CDs consist of "lands" (flat areas) and "pits" (depressions), which have been pressed into a plastic disc and then coated with a

reflective layer — typically aluminum — allowing a laser beam to interpret the lands as ones and pits as zeros — in other words, binary code, the basis for all computer operations. Hot on its heels is the DVD burner. DVDs hold more data (as much as 4.7 GB) and consequently cost more money — especially the re-writable drives.

When you burn your own CD, you don't press lands and pits into the plastic disc. Instead, the disc is coated with a photosensitive dye. When the dye is heated (not really burned) at a spot by a write laser (which is hotter than the read laser in a standard CD-ROM), it turns opaque so that light is reflected at that location. These opaque areas are interpreted as ones and the unheated, clear dye areas as zeros. CDs are able to hold vast amounts of data because these lands and pits are microscopically small. They're not affected by magnetism and are far more stable and reliable than floppy diskettes.

## Magneto-optical (MO) and tape drives

Magneto-optical technology combines the properties of light and magnetism to create the data storage medium. A disk cartridge can hold as much as 2.3 GB of

data and is about the same size as a 1.44 MB floppy.

The manufacturers of MO disks are Fujitsu, Maxell, Sony and Verbatim. The advantage of MO removable media is that you can read, write and re-write to it instantly and reliably. The manufacturers of this system promise safe storage for a decade.

Their main disadvantage, though, is the speed at which they back up and retrieve information because they access data sequentially; the drive has to search from point A to B and so on, in sequence, which takes time. And if you think things have gone about as far as they can go, Iomega will soon market its "Peerless" drive, which will be able to hold up to 20 GB of data! You really can take it with you. ♦

## more INFO

Computerhope.com: Tape Drive ABCs  
www.computerhope.com/help/tape.htm  
Iomega Jaz  
www.iomega.com/jaz/  
Iomega Zip  
www.iomega.com/zip/index.html  
MaxiDisk  
www.herne.com/mdisk1.htm  
WinZip  
www.winzip.com/

**Markham**  
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- 40GB ATA100 7200rpm Hard Drive,
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- Panasonic 1.44MB Floppy Drive,
- LG 24x10x40 CD-RW Drive,
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# Publishing for fun and profit

By CHRIS TALBOT

Have you ever read a magazine and said to yourself, "I can do better than that?" If you're still reading, the answer is probably "yes."

What kept you from publishing your own magazine? Lack of knowledge? Lack of talent? Too costly? Couldn't do it by yourself? Too corporate? It's not easy or cheap to put something like *Toronto Computes!* out on a monthly basis. Deadlines, ad sales, copy editing, hiring freelance writers and photographers (and finding the money to pay them) — it takes a staff of skilled people to make it work.

Professional magazine publishing isn't for everyone. However, amateur publishing can be an easy and cheap hobby. Known as "fanzines" or "zines," amateur publications are labours of love that generate little to no profit (most generate losses), but give that desired voice to editors and writers. In many cases, the text and graphics in zines are too far off the mainstream to ever be considered worthy of publication in typical magazines.

Usually printed on 8.5x11-inch paper

and folded over to create a booklet-sized publication, zines are sold, traded and collected by people all over the world. Zine publishers, sometimes called zinesters, have been around for as long as people have had access to printing presses, but the hobby really took off with the invention of cheap and accessible copy machines.

The zines of the 1970s (the height of the zine craze) were written on typewriters, laid out by cutting and pasting text and graphics, copied and then distributed by snail mail, word of mouth and in public places. These days, most of the work is done on computers. Desktop publishing and image manipulation software, word processors and laser printers make it easy to put a zine together, but most would-be publishers would prefer to work on a personal Web site than on a print zine these days.

However, there are still zinesters around. Small press and zine fairs (like Canzine or Word On The Street in Toronto) prove the printed word is not yet dead.

Toronto's Jeff Chapman published his first zine in 1991. He was still in high school. The first issue of *YIP*, a humour

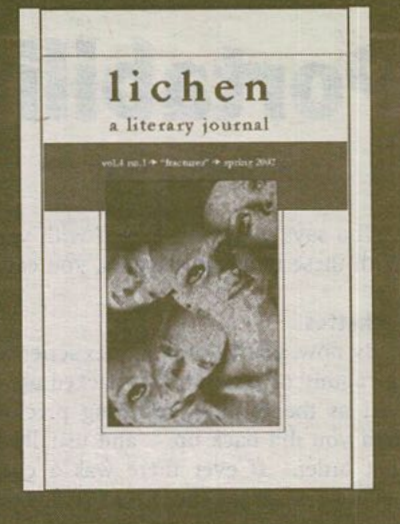
zine dedicated to the nonsensical, started as a very primitive publication. Stories were typed in *Word Perfect 5.1* for DOS and printed on a dot-matrix printer. Illustrations were drawn by hand. Everything was applied to paper using rulers, exacto knives and waxing machines.

To prove how ridiculous the content was, stories were printed with bylines like Milky Puppy, Asphalt Bastard and Corn Syrup. Gradually, Chapman and his friends moved from the cut and paste method to desktop publishing with Aldus *PageMaker* (now owned by Adobe) and *Quark XPress*. *YIP* is still being published, although on an irregular basis. In the mid-1990s, Chapman started archiving *YIP*'s stories, artwork and general insanity to a Web site ([www.yip.org](http://www.yip.org)).

When asked to offer any general tips to the next generation of zinesters, Chapman said, "In terms of printing, ignore posted prices and negotiate the lowest price per unit you can. Most [copy shops] will negotiate in order to have regular business. Insist on test copies and refuse to pay for any results that are not what you desired."

Chapman added that publishers should keep their time and effort in mind when setting a price. He said, "Your goal might just be to have as wide an audience as possible see your work, but this thrill probably won't last for years, and if you aren't being decently compensated for what you're giving people, you'll probably lose some of your motivation."

Motivation is a big problem in the zine world. Typically, zinesters put their sweat and blood into the first issue and create something they can be proud of. After two or three more issues, the novelty of zines wears off and they fade out of the scene. Others stick it out for



years, such as Mike Gunderloy, the creator and original editor of the now-defunct *Factsheet 5* (rumours exist that *Factsheet 5* has a new owner and will resume publishing sometime soon). *Factsheet 5* was a popular zine dedicated to reviewing zines.

Some publications start small and then try to build themselves up so they become accepted on a larger scale. *Lichen Literary Journal*, published out of Whitby, started up in 1999. Its team of four editors publish issues of *Lichen* twice a year. According to Ruth Walker, one of the editors, one of the most difficult things for a new publication is getting publicity, although trying to convince writers to submit work is also a chore.

When launching a new publication, there are a few things to keep in mind, Walker said. Have a focus, maintain a sense of humour and don't compromise standards for friendship. *Lichen* launched its Web site in January at [www.lichenjournal.ca](http://www.lichenjournal.ca).

The best advice to the budding zinester is to read zines. In Toronto, there are only a handful of places that carry self-published books and zines — Suspect Video (605 Markham St. and 619 Queen St. West), The Beguiling (601 Markham St.) and Pages Books and Magazines (256 Queen St. West). ♦

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# Musical Odyssey: Quantization and MIDI

By NESTOR GULA

When learning about MIDI, there are a lot of new phrases and concepts to learn. This is occasionally frustrating for musicians, as it seems to be more technical than creative. It is not called MIDI programming for nothing. Perhaps one of the strangest and initially most baffling phrases is the term quantize.

Basically it means that the rhythmic values — the duration of a played note — of the MIDI information are rounded off to a set value, be it whole notes, sixteenth notes, dotted notes, whatever. Consequently, this system usually then "corrects" all the rhythmic information in a given performance to have all the notes line up evenly. Let me explain with a personal experience.

My first encounters with the term quantize came when I bought a drum machine. There were two ways to program rhythms in this machine — this is true of most drum machines. In the simplest method, you could write a one- to 99-bar rhythm pattern live in real time by tapping on the different drum keys at appropriate times. The second method

involved a complicated step-writing system, whereby you enter the notes one at a time according to the beat count. This system is good for programming rhythms from existing music scores or creating very complex patterns. The quantize function works differently in both instances.

In the real-time method, the quantize function corrects you if your timing is off. If you set your quantize filter at one-eighth note, all the notes that you hit will be moved to the nearest eighth note. Having the quantize set to one-eighth note also means that you cannot have more than eight beats in a 4/4 time bar. Slight syncopation and beat irregularities will be achieved if you set the quantize threshold to a lower level such as 1/32 or 1/48. By setting the quantize level at 1/192 (on some machines this setting is simply labeled as turning quantize off) my drum machine would record the patterns exactly as I entered them.

By fooling around with the quantize threshold, you could alter the feeling of the rhythms. A high quantize setting produced a mechanical/industrial rhythm with very little life or move-

ment. A low quantize setting will give a more lively and real-sounding rhythm pattern.

In the step-writing method, the user enters the note according to the quantized time. Let's say you want to program one bar of a 4/4-time pattern. To enter a 1/16 snare note on every second 1/16 beat, you would set quantize at 1/16 and program the note on every second beat. If you want two quarter note high-hats to sound twice in the pattern, you must leave the pattern, select the quantize level at one-quarter and then re-enter the program to enter the new information according to the new quantize threshold. The fact that the first snare drum was inputted at 1/16 will not affect any new information being programmed nor will it itself be affected by a change of quantize level.

The function of quantize is to let you structure your notes in a precise and pre-ordered manner. A drawback of the step-writing method is that you can only enter 1/16 notes when in the 1/16 quantize level. To enter notes of different duration you have to set a different

quantize level. This gets to be quite confusing, but the beauty of this is that when you do it properly you will have all the elements of the rhythm pattern falling exactly where you want them to.

The drawback with the whole quantize system of ordering notes is that it makes the music itself lifeless by playing identical patterns of seemingly equal and well-mannered notes consistently without fail. This is what is sometimes unaffectionately known as the "MIDI sound" and why many traditional musicians steer a clear path away from MIDI. It is also why many MIDI experts seek to find a way to make MIDI sound more human.

A simple way to do this is to set the quantize level of your MIDI recording device, whether drum machine, sequencer or computer program, to the 1/192 level and then record the pattern live. If you are recording a drum pattern that will be repeated often in a song, try to record it as several beats long instead of one beat. Recording several versions of the same pattern and mixing them in a random fashion will also get rid of the structured quantized MIDI sound. ♦

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# Evolution Music gives you a basic music studio

By NESTOR GULA

Many people like all-in-one packages to give them easy solutions to the tasks they have to perform. Although these packages are fully compatible within themselves, they are not always the best solution because there are always compromises made somewhere along the line. The Evolution Music Creator Pro 49C USB software/hardware kit falls directly into this slot.

The package works well but there are some limitations. The main feature of this kit is the MK-249C keyboard. It has 49 regular touch-sensitive keys, 12 assignable dials for real-time effect control, an assignable slider and modulation wheel, USB and MIDI out port, 10 memories for storing presets and octave up/down keys that will take the sound out of the range of human hearing.

There are three software programs that come with this package — *Sound Studio*, which is basic sequencing and recording software; *Music Teacher*, which teaches piano playing; and *Music Planet*, an easy-to-use sample music



creator.

The package loads without a hitch and

its components work well together. A nice bonus is that you can hook it up to the USB or the game port, meaning that older PCs without USB ports can use this package.

The problem lies in that the software is quite simple. In *Sound Studio* you can have 256 tracks of MIDI but are limited to four tracks of

disposal. *Music Teacher* is basic and *Music Planet* is more of a curiosity than a real musical tool.

The MK-249C keyboard can be used as a MIDI controller, sending MIDI information to other MIDI devices, but you will need to buy a power adapter for it to do so. When using it hooked up to the computer, the keyboard gets its power from either the MIDI or USB cable.

The Evolution Music Creator Pro 49C USB kit is an entry-level package for people who want a complete kit in one box. It works fine, but I suspect that purchasers of this system will soon opt for a better software package with cooler and more diverse sounds and better recording capabilities. ♦

## more INFO

Evolution MK-249C  
\$210.00  
Evolution  
www.evolution.co.uk

Requirements:  
Windows 98/ME/XP/2000, 233MHz or higher  
processor, 64 MB RAM, Windows compatible  
soundcard, DirectX, speakers

Bright Oceans Inter-Telecom Corporation Canada Branch

Address: 2022 Sheppard Ave. East (at Sheppard & Brian Dr.)

Tel: (416) 493-3300

MON-FRI: 10:30-19:00 SAT: 11:30-16:00 SUN: CLOSED

Email address: keit\_computer@on.aibn.com HTTP://www.boco.com.cn

Fax: (416) 493-3308

## KEIT Computers

We promise if any part has a problem in warranty we will exchange it with a new one (except physically damaged) 1 year warranty on hardware, 3 years labor on system.

**Intel Celeron 1G \$419**

Celeron 1.1G/1.2G/1.3G \$429/439/449

P3-933/1G/1.1G/1.2G \$499/509/519/619

Houston M756 MB

128MB PC-133 SDRAM

64M VIDEO shared/56K Modem

20GB HDD ATA100 & 1.44M FD

52X CD-ROM & 180W SPK

16BIT sound card & network card

ATX MID TOWER CASE 300W

109 Win98 KB&MOUSE&Pad

change mainboard to ASUS TUSI-M...+\$50

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TB 250/1.1G/1.2G/1.3G \$449/479/489/499/529

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128MB PC-133 SDRAM

64M Video shared/56K Modem

20GB HDD ATA100 & 1.44M FD

52X CD-ROM & 180W SPK

16Bit sound card & network card

ATX Mid Tower Case 300W

109 Win98 KB & Mouse & Pad

change mainboard to ECS K7SEM...+\$40

**\*MONITOR\***

15" NEC1550V/17" NEC1700

15" Samsung 151S white/silver

17" Samsung 171S white/silver

18" NEC 1850E

17" Aquaview 7GS

17" LG 700S/E700B

17" Samsung 750S/753DF

17" Samsung 700NF

17" Viewsonic E70/E70F

17" Viewsonic E75/P75F

17" NEC AS75F/700+

19" Aquaview 9GS/LG E900B

19" Samsung 950B/955DF

19" Samsung 900NF

19" Viewsonic E90/E90F

19" Viewsonic PF700/G90F

19" NEC AS90/AS95F

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21" Samsung 1100P+

22" NEC AS120/FE1250+

22" Viewsonic G810/G815

22" Viewsonic P220/P225F

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Celeron 1.1G/1.2G/1.3G \$509/519/529/539

ASUS TUV4X MB

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Riva TNT2 32M 4X AGP

40GB HDD ATA100 & 1.44M FD

52X CD-ROM & 180W SPK

56K MODEM & 16BIT SOUND

ATX MID TOWER CASE 300W

109 Win98 KB & MOUSE & Pad

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XP1700/1800/1900/2000\$589/599/679/789

Duron800/900/950/1G \$45 9/469/474/479

ECS K755A MB

128MB PC-133 sdr&m & 180W SPK

Riva TNT2 32M AGP & 1.44M FD

40GB HDD ATA 100 & 52X CD-ROM

16Bit Sound card & Network Card

56K Modem pci & ATX 300W CASE

109 Win98 KB&Mouse & Pad

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40GB 5400rpm/7200rpm

60GB 5400rpm/7200rpm

80GB 5400rpm/7200rpm

120GB/160GB 5400rpm

SEAGATE

40GB 5400rpm/7200rpm

IBM (7200rpm)

40G/60G

**\*CDROM&DVD\***

FuturePower52/LG 52X

Creative 52x/NEC 52X

Artice 16X/LG 16X DVD

Pioneer16X tray / slot

**\*CD-WRITER\***

BTC 12X8X32.16X10X40

LG 24x10x40/retail

LG 32x10x40/retail

Artice 24x10x40/Yamaha20x10x40

Sony 16x10x40/24x10x40

Plextor 24x10x40/40X12X40

Philips 4x4x4(USB)

Panasonic LED311 dvdrw

**Intel P4-1.6 \$649**

P4-1.7G/1.8G \$679/719

P4-1.9G/2G/2.2G \$809/949/1269

ECS P4 MB

128MB PC-133 SD RAM

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40GB HDD & 1.44M FD&56K modem

52X CD-ROM & 180W SPK

16 BIT SOUND & Network card

ATX MID TOWER CASE 300W

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**AMD TB 1.333G \$619**

TB 950G/1.1G/1.2G/XP1600\$569/599/609/639

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ASUS A7V133MB

128MB PC-133 SD RAM

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40GB ATA100 & 1.44M FD

52X CD-ROM & 180W SPK

56K MODEM pci & 32 bit SOUND pci

ATX MID TOWER CASE 300W

109 Win98 KB & Mouse & Pad

change mainboard to ASUS A7A266...+\$20

**\*VIDEO CARD\***

ATI tv wonder/DV/usb

Nvidia Riva TNT2 32M 4xAGP

ATI Xpert128 16M PCI retail

ATI Xpert2000 32M PRO

ATIall-in-w Radeon 7500 / retail

ATIall-in-w Radeon 8500 DVI

ATI Radeon 7000 / retail

ATI Radeon 7500 / retail

ATI Radeon 8500 / retail

Geforce2Mx200 64Mtv / Mx400tv

MSI Geforce4 64M ddr

Asus Geforce4 64M ddr

Asus V7100 Magic 32MpureSE/tvSE

Artice 16X/LG 16X DVD

Asus V7100 pro 32M pure/tv

Asus V7700 TIVX 64M pure/deluxe

Asus V7700 TI 64M pure/deluxe

Asus V8200 T2 64Mpure/deluxe

Asus V8200 G3 64M pure/deluxe

AlteccLansing200w/300w/500w

CambridgeFPS 1000

CambridgeFPS2000/2500

**\*SPEAKERS\***

ATI tv wonder/DV/usb

Nvidia Riva TNT2 32M 4xAGP

ATI Xpert128 16M PCI retail

ATI Xpert2000 32M PRO

ATIall-in-w Radeon 7500 / retail

ATIall-in-w Radeon 8500 DVI

ATI Radeon 7000 / retail

ATI Radeon 7500 / retail

ATI Radeon 8500 / retail

Geforce2Mx200 64Mtv / Mx400tv

MSI Geforce4 64M ddr

Asus Geforce4 64M ddr

Asus V7100 Magic 32MpureSE/tvSE

Artice 16X/LG 16X DVD

Asus V7100 pro 32M pure/tv

Asus V7700 TIVX 64M pure/deluxe

Asus V7700 TI 64M pure/deluxe

Asus V8200 T2 64Mpure/deluxe

Asus V8200 G3 64M pure/deluxe

AlteccLansing200w/300w/500w

CambridgeFPS 1000

CambridgeFPS2000/2500

**Intel P4-1.6G \$889**

P4-1.7G/1.8G \$919/959

P4-1.9G/2G/2.2G\$1049/1189/1509

ECS P4 MB

256MB PC-133 SD RAM

ATI Radeon 64M Dual tv out

40GB HD&1.44M FD&56K Modem

16X DVD & 24x10x40 CDRW

P4 CASE & 500w subwoofer

16 bit SOUND & Network card

Internet KB & Wheel Mouse & Pad

changeSDRAM to 512M.....+\$100

**AMD XP 1800 \$799**

TB950/1.1G/1.2G/1.3G \$719/749/759/769

XP1600/1700/1900/2000 \$779/789/879/979

ECS K755A MB

256MB PC-133 SDRAM

ATI Radeon 7000 64M tv out

40GB ATA100 & 1.44M FFD

16X DVD & 24X10X40 CDRW

16 BIT SOUND Card & Network Card

56K Voice FAX-MODEM

ATX CASE 300W & 180W SPK

109 Win98 KB&MOUSE&Pad

change SDRAM to DDRAM.....+\$20

**\*MAIN BOARD\***

Socket 370 (P3,Celeron)

ASUS TUV4X/TUSL2C

ASUS TUSI-M(vga, audio, lan)

Soyo 7VBA+133

Houston 758(vga, audio, modem, lan)

MSI 6309/6337

Socket 478 (P4)

Asus P4B(sdr)/P4T-E(rd)

Asus P4B266-C/P4B266(DDR)

Asus P4S333M/P4S333(DDR)

Intel 850MD/MV

Intel 845 HV/WH/PT/GB/79/183/193/199

MSI 6547/6391

ECS P455A/P4VXS2

ECS L455MG(vga, audio, lan)

Socket A

ASUS A7V133/A7V266

# PREMIER COMPUTER CANADA - PCCANADA.COM

## PREMIER CHOICE BRONZE

- PC Chips M925LMRT for Socket 478 CPUs or PC Chips M810LM for Socket A CPUs
- Panasonic 3.5" - 1.44MB HD Floppy Disk Drive
- 40GB Fast Ultra-100 Hard Disk Drive @ 5400RPM
- 128MB SDRAM, PC/133MHz, 168Pin RAM Memory
- Mid-Tower 6 Bay ATX Case w/ 250W Power Supply
- On-Board EIDE Controller & Ultra/100 Support
- 2- USB Ports, 1- 16550 Serial Ports, 1 PS/2 Mouse Port & 1- Bi-Directional Parallel Port
- On-Board AGP 3D Video w/ 64Mb Buffer
- On-Board PCI Stereo Sound w/ Surround Sound
- 56k Fax/Modem w/ Voicemail, v.90, AMR
- On-Board PCI Full Duplex Network Adapter
- Fifty-Two Speed (52X) Max EIDE CD-ROM Drive
- KDS 17" Digital .25dp SVGA Colour Monitor
- Mitsumi 104 Enhanced Soft-Touch Win 95 Keyboard
- Labtec Spin 50 Amplified Powered Stereo Speakers
- Microsoft Compatible Serial Mouse and Mouse Pad
- MS Windows XP Home OEM w/ CD and Manual
- 30 Days Unlimited Internet Access w/ Internet Direct
- 5 Years Labour & 1 Year Parts Warranty

AMD Duron 950MHz.....	\$874.99	or \$32/mth
AMD Duron 1.0-GHz.....	\$884.99	or \$33/mth
AMD Duron 1.1-GHz.....	\$899.99	or \$33/mth
AMD Duron 1.2-GHz.....	\$914.99	or \$34/mth
AMD Duron 1.3-GHz.....	\$944.99	or \$35/mth
AMD Athlon XP-1700+.....	\$989.99	or \$36/mth
AMD Athlon XP-1800+.....	\$1029.99	or \$38/mth
AMD Athlon XP-1900+.....	\$1094.99	or \$40/mth
AMD Athlon XP-2000+.....	\$1189.99	or \$44/mth
AMD Athlon XP-2100+.....	\$1284.99	or \$47/mth
Intel Pentium 4-1.6GHz.....	\$1044.99	or \$38/mth
Intel Pentium 4-1.7GHz.....	\$1079.99	or \$40/mth
Intel Pentium 4-1.8GHz.....	\$1129.99	or \$42/mth
Intel Pentium 4-1.9GHz.....	\$1209.99	or \$44/mth
Intel Pentium 4-2.0GHz 512k.....	\$1369.99	or \$50/mth
Intel Pentium 4-2.2GHz 512k.....	\$1694.99	or \$57/mth

## PREMIER CHOICE SILVER

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- Thermaltake Volcano 6CU+ Heat Sink/Fan for AMD CPU
- Panasonic 3.5" - 1.44MB HD Floppy Disk Drive
- 40GB Fast Ultra-100 Hard Disk Drive @ 7200RPM
- 256MB SDRAM, PC/133MHz, 168Pin RAM Memory
- Premium 6 Bay Mid-Tower ATX Case w/ 300W P.S.
- On-Board EIDE Controller & Ultra/100 Support
- 4- USB Ports, 2- 16550 Serial Ports, 1 PS/2 Mouse Port & 1- Bi-Directional Parallel Port
- ATI Radeon 7000 AGP Video w/ 32Mb & TV-Out
- 16X DVD-ROM Drive w/ 40X CDRW support
- SoundBlaster PCI 128 Plug & Play Stereo Sound Card
- Cambridge Inspire 2.1 Speaker System w/ Subwoofer
- Rockwell 56K Int. Voice/Fax/Modem v.90 (PCI)
- Smartlink 10/100Mbit Full-Duplex PCI Network Card
- KDS 17" Digital .25dp Colour CRT Monitor, Perfectly Flat
- Mitsumi 104 Enhanced Soft-Touch Win 95 Keyboard
- Logitech Optical Mouse w/ Wheel & Mouse Pad
- MS Windows XP Home OEM w/ CD and Manual
- 30 Days Unlimited Internet Access w/ Internet Direct
- 5 Years Labour & 1 Year Parts Warranty

AMD Duron 950MHz.....	\$1304.99	or \$48/mth
AMD Duron 1.0-GHz.....	\$1314.99	or \$48/mth
AMD Duron 1.1-GHz.....	\$1329.99	or \$49/mth
AMD Duron 1.2-GHz.....	\$1344.99	or \$49/mth
AMD Duron 1.3-GHz.....	\$1374.99	or \$50/mth
AMD Athlon XP-1700+.....	\$1419.99	or \$52/mth
AMD Athlon XP-1800+.....	\$1459.99	or \$54/mth
AMD Athlon XP-1900+.....	\$1524.99	or \$51/mth
AMD Athlon XP-2000+.....	\$1619.99	or \$54/mth
AMD Athlon XP-2100+.....	\$1714.99	or \$57/mth
Intel Pentium 4-1.6GHz.....	\$1479.99	or \$54/mth
Intel Pentium 4-1.7GHz.....	\$1514.99	or \$51/mth
Intel Pentium 4-1.8GHz.....	\$1564.99	or \$52/mth
Intel Pentium 4-1.9GHz.....	\$1644.99	or \$55/mth
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Intel Pentium 4-2.2GHz 512k.....	\$2129.99	or \$71/mth

## PREMIER CHOICE GOLD

- Asus P4B266 Motherboard for Intel Pentium 4 CPUs or Asus A7V266-E Motherboard for AMD CPUs
- Thermaltake Volcano 7 Heat Sink/Fan for AMD CPUs
- Panasonic 3.5" - 1.44MB HD Floppy Disk Drive
- 60GB Fast Ultra-100 Hard Disk Drive @ 7200RPM
- 256MB DDR SDRAM, PC2100 RAM Memory
- Enlight Mid-Tower ATX Case w/ 7 Bays & 300W P.S.
- On-Board EIDE Controller & Ultra/100 Support
- 4- USB Ports, 2- 16550 Serial Ports, 1 PS/2 Mouse Port & 1- Bi-Directional Parallel Port
- Asus v7100/Pro GeForce MX400 w/ 32Mb & TV-Out
- Panasonic 24x10x40 CD-RW w/ Burn Software
- SoundBlaster Live 5.1 PCI Stereo Soundcard
- Altec Lansing AVS500 w/ 4 Speakers & Subwoofer
- Supra 56K Internal Voice/Fax/Modem v.90 (PCI)
- D-Link 10/100Mbit Full-Duplex Network Adapter (PCI)
- KDS 19" Digital Monitor .25dp 1600x1280 Nt, MPR2
- Keytronic 104 Enhanced Soft-Touch Win 95 Keyboard
- Microsoft Wheel Mouse Optical Mouse w/ Mouse Pad
- MS Windows XP Home OEM w/ CD and Manual
- 30 Days Unlimited Internet Access w/ Internet Direct
- 5 Years Labour & 1 Year Parts Warranty

AMD Duron 950MHz.....	\$1739.99	or \$58/mth
AMD Duron 1.0-GHz.....	\$1749.99	or \$58/mth
AMD Duron 1.1-GHz.....	\$1764.99	or \$59/mth
AMD Duron 1.2-GHz.....	\$1779.99	or \$59/mth
AMD Duron 1.3-GHz.....	\$1809.99	or \$60/mth
AMD Athlon XP-1700+.....	\$1854.99	or \$62/mth
AMD Athlon XP-1800+.....	\$1894.99	or \$63/mth
AMD Athlon XP-1900+.....	\$1959.99	or \$65/mth
AMD Athlon XP-2000+.....	\$2054.99	or \$69/mth
AMD Athlon XP-2100+.....	\$2149.99	or \$72/mth
Intel Pentium 4-1.6GHz.....	\$1874.99	or \$63/mth
Intel Pentium 4-1.7GHz.....	\$1909.99	or \$64/mth
Intel Pentium 4-1.8GHz.....	\$1959.99	or \$65/mth
Intel Pentium 4-1.9GHz.....	\$2039.99	or \$68/mth
Intel Pentium 4-2.0GHz 512k.....	\$2199.99	or \$73/mth
Intel Pentium 4-2.2GHz 512k.....	\$2524.99	or \$84/mth

## PREMIER CHOICE PLATINUM

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- Thermalright SK6 Heat Sink & Fan for AMD CPUs
- Panasonic 3.5" - 1.44MB HD Floppy Disk Drive
- 80GB Fast Ultra-100 Hard Disk Drive @ 7200RPM
- 512MB Rambus, PC800, Non-ECC Memory for P4 or 512MB DDR SDRAM PC2100 Memory for AMD
- Enlight Mid-Tower ATX Case w/ 7 Bays
- Pentium 4 - 300W ATX Power Supply w/ 2 Fans
- On-Board EIDE Controller & Ultra/100 Support
- 4- USB Ports, 2- 16550 Serial Ports, 1 PS/2 Mouse Port & 1- Bi-Directional Parallel Port
- ATI All-in-Wonder Radeon 8500 DV w/ 64Mb DDR
- Plextor 40x/12x/40x CR-RW Drive w/ Software
- SoundBlaster Audigy Value PCI Stereo Soundcard
- Creative Inspire 5.1 5300 w/ 5 Speakers & Subwoofer
- US Robotics 56K Internal Fax/Modem v.90 (PCI)
- 3COM 10/100Mbit Full-Duplex Network Adapter (PCI)
- KDS Radius Rad5 15" LCD Monitor, .297mm
- Microsoft Natural Keyboard w/ Ergonomic Design
- Logitech i-Feel Mouse w/ Mouse Pad
- Thermaltake 80mm Second Case fan
- Arctic Silver III Thermal Heat Compound
- MS Windows XP Professional OEM w/ CD and Manual
- 30 Days Unlimited Internet Access w/ Internet Direct
- 5 Years Labour & 1 Year Parts Warranty

AMD Duron 1-GHz.....	\$2899.99	or \$96/mth
AMD Athlon XP-1700+.....	\$3004.99	or \$98/mth
AMD Athlon XP-1800+.....	\$3044.99	or \$99/mth
AMD Athlon XP-1900+.....	\$3109.99	or \$102/mth
AMD Athlon XP-2000+.....	\$3204.99	or \$105/mth
AMD Athlon XP-2100+.....	\$3299.99	or \$108/mth
Intel Pentium 4-1.6GHz.....	\$3024.99	or \$99/mth
Intel Pentium 4-1.7GHz.....	\$3059.99	or \$100/mth
Intel Pentium 4-1.8GHz.....	\$3109.99	or \$102/mth
Intel Pentium 4-1.9GHz.....	\$3189.99	or \$104/mth
Intel Pentium 4-2.0GHz 512k.....	\$3349.99	or \$110/mth
Intel Pentium 4-2.2GHz 512k.....	\$3674.99	or \$120/mth

## Premier CPUs & Memory

AMD Duron 950MHz @ 100/200MHz (Socket A).....	see web
AMD Duron 1-GHz @ 100/200MHz (Socket A).....	see web
AMD Duron 1.1-GHz @ 100/200MHz (Socket A).....	see web
AMD Duron 1.2-GHz @ 100/200MHz (Socket A).....	see web
AMD Duron 1.3-GHz @ 100/200MHz (Socket A).....	see web
AMD Athlon 1-GHz @ 100/200MHz (Socket A).....	see web
AMD Athlon 1.3-GHz @ 133/266MHz (Socket A).....	see web
AMD Athlon 1.4-GHz @ 133/266MHz (Socket A).....	see web
AMD Athlon XP 1600+ @ 1.40GHz (Socket A).....	see web
AMD Athlon XP 1700+ @ 1.47GHz (Socket A).....	see web
AMD Athlon XP 1800+ @ 1.53GHz (Socket A).....	see web
AMD Athlon XP 1900+ @ 1.60GHz (Socket A).....	see web
AMD Athlon XP 2000+ @ 1.67GHz (Socket A).....	see web
AMD Athlon XP 2100+ @ 1.73GHz (Socket A).....	see web
Intel Celeron 1-GHz (FC-PGA2) @ 100MHz.....	see web
Intel Celeron 1.1-GHz (FC-PGA2) @ 100MHz.....	see web
Intel Celeron 1.2-GHz (FC-PGA2) @ 100MHz.....	see web
Intel Celeron 1.3-GHz (FC-PGA2) @ 100MHz.....	see web
Intel Pentium III 1-GHz (FC-PGA2) @ 133MHz.....	see web
Intel Pentium 4-1.6GHz (Socket 478).....	see web
Intel Pentium 4-1.7GHz (Socket 478).....	see web
Intel Pentium 4-1.8GHz (Socket 478).....	see web
Intel Pentium 4-1.9GHz (Socket 478).....	see web
Intel Pentium 4-2.0GHz (Socket 478) 512k.....	see web
Intel Pentium 4-2.2GHz (Socket 478) 512k.....	see web

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128 MB, SDRAM PC/133MHz.....	see web
256 MB, SDRAM PC/133MHz.....	see web
512 MB, SDRAM PC/133MHz.....	see web
256 MB, DDRAM SDRAM PC2100/PC2700.....	see web
512 MB, DDRAM SDRAM PC2100/PC2700.....	see web
256 MB, DDRAM SDRAM PC2100 Registered.....	see web
512 MB, DDRAM SDRAM PC2100 Registered.....	see web
128 MB, Rambus PC800 Non-ECC.....	see web
256 MB, Rambus PC800 Non-ECC.....	see web
512 MB, Rambus PC800 Non-ECC.....	see web

## Premier Cooling Supplies

Thermaltake Volcano 6 CU / Volcano 6 CU+.....	\$24.99/\$29.99
Thermaltake Volcano 7 Variable Fan (5000RPM @ 35°C).....	\$34.99
Thermaltake Dragon Orb 3 - 7000 RPM.....	\$34.99
Thermaltake Crystal Orb (Cooler for Video Cards).....	\$24.99
Thermaltake Storm Orb / Memory Cooling Kit.....	\$14.99/\$19.99
Thermaltake 60mm Case Fan / 80mm Case Fan.....	\$14.99/\$14.99
Just Cooler 60mm Case Fan / 80mm Case Fan.....	\$9.99/\$9.99
Cidcom FC-PGA Heat Sink / AMD Heat Sink.....	\$9.99/\$9.99
Thermalright SK6 (All Copper Heat Sink and Delta Fan).....	\$69.99
Arctic Silver III Thermal Paste.....	\$9.99
Just Cooler HD-100 Hard Drive Cooler.....	\$14.99
Removable Hard Drive Rack w/ Fan.....	\$24.99

### Full List of Cooling Supplies Available Online

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Motherboards for AMD CPUs	
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Abit KR7a-133, Socket A, VIA KT266a (ATX).....	\$194.99
Abit KR7a-133R, Socket A, VIA KT266a (ATX) RAID.....	\$224.99
Asus A7A266, Socket A, ALI (ATX) SDRAM/DDR RAM.....	\$149.99
Asus A7M266, Socket A, AMD 761 (ATX).....	\$179.99
Asus A7N266, Socket A, nForce (ATX).....	\$244.99
Asus A7V266-E RAID, Socket A, KT266a (ATX) RAID.....	\$229.99
PC Chips M810, Socket A (MATX) w/ Video, Sound & Lan.....	\$114.99
Tyan S2460N, Dual Socket A, AMD 760MPX (ATX).....	\$344.99
Motherboards for Intel CPUs	
A-bit Vh6T, FC-PGA2, VIA 133A (ATX) UDMA/100.....	\$129.99
A-bit BL7, Socket 478, Intel i845 Chipset (ATX).....	\$194.99
A-bit BD7-RAID, Socket 478, Intel i845D (ATX) RAID.....	\$224.99
Asus P4B, Socket 478, Intel i845 Chipset (ATX).....	\$189.99
Asus P4B266, Socket 478, Intel i845D Chipset (ATX).....	\$239.99
Asus P4S333, Socket 478, SIS 645 Chipset (ATX).....	\$164.99
Asus P4T-E, Socket 478, Intel i850 Chipset (ATX).....	\$244.99
PC Chips M758, PGA-370 (MATX) w/ Video, Sound & Lan.....	\$99.99
PC Chips M925, Socket 478 (MATX) w/ Video, Sound & Lan.....	\$149.99
Tyan S1854, FC-PGA & Slot 1, Via 133 Chipset (ATX).....	\$149.99

## Premier Hard Drives & Storage

20GB UDMA/100 5400RPM EIDE Hard Drive.....	\$114.99
40GB UDMA/100 5400RPM EIDE Hard Drive.....	\$129.99
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# Fans Rush for info online – who's watching who?

By GEOFF MARTIN

One of Toronto's most popular exports has been causing quite a stir on the Net recently, as the maniacally devoted fans of progressive rockers Rush have been combing Web sites for any crumb of information about the band's upcoming album, which is to be its first in six years.

Message boards were all aflutter when a New Jersey deejay claimed to have the inside scoop on the band's 17th album, and told fans that it was to be called "Vapour Trails." Not long after that, another fan posted a message to the popular Rush site [www.r-u-s-h.com](http://www.r-u-s-h.com) stating that he had received an advance copy of the album and that he planned to post samples of the



2002 Grammy's Host Jon Stewart:

Better luck next year

album later that day. This triggered an absolute feeding frenzy from fans all over the world and within several hours, the site's server suffered a seizure as a result of the relentless door-knocking from Rush fans. The site's Web master was forced to pull it offline.

Worse still, the entire episode appears to have been a hoax, as no samples have been seen on the site to date. Anthem Records, the band's label, have tried to satiate the fans' unquenchable thirst for all things Rush and recently confirmed that the reported album title and a subsequently leaked track list were correct and launched a mysterious Web site at [www.official-rush.com](http://www.official-rush.com). At press time, the site featured nothing more than a stark black background and a simple black-and-white graphic portraying an eye looking back at the visitor, perhaps to indicate that the band's members have been watching its fans just as closely as they're being watched themselves.

Anthem also announced that the first single from the album, called "One Little Victory," would be released to radio stations on March 29 and that the rest of the album would hit stores on May 14.

If there are any fans so dedicated that they can't wait that long, they can always spend their time planning for RushCon 2002, which is a Toronto convention dedicated to Rush, its fans and its music, scheduled to take place in July. Few pop culture icons command a following dedicated enough to inspire an entire convention, but Rush is apparently now in the impressive company of fellow rock band KISS and Star Trek – you can find the proof at [www.rushcon.org](http://www.rushcon.org).

## Time to get to work, Hilary

Recording Industry Association of America (RIAA) president Hilary Rosen is back to her constant whining about digital music piracy, claiming that the record industry slid by up to 10 per cent in 2001, thanks in large part to the scourge of MP3s.

Rosen revealed numbers showing that U.S. record company shipments in 2001 had been reduced by 10.3 per cent over the previous year and that the total dollar value of shipments had fallen by 4.1 per cent during the same period. The recording industry tracking firm Soundscan also supported these numbers, showing that sales of compact discs, the industry's most popular format, were off by 5.8 per cent from the previous year during the year-to-date ended February 17. Rosen acknowledged that there were likely other

factors that affected the industry, such as critical fourth-quarter release schedules that were thrown out of whack in the wake of the September 11 terrorist attacks, but she couldn't resist the urge to place the lion's share of the blame on MP3s.

"When 23 per cent of surveyed music consumers say they are not buying more music because they are downloading or copying their music for free, we cannot ignore the impact on the marketplace," Rosen said in a statement.

Of course, it couldn't be that the music industry is growing horribly stale in the age of Britney Spears and 'NSYNC, could it? One need only look to the snooze-inducing Grammy Awards last month for the answer – ratings for the event (which is supposed to feature the very best the industry has to offer) were down nearly 20 per cent over last year's totals. By those numbers, Rosen might want to think about encouraging record labels to groom some innovative new talent, rather than going after people who are downloading copies of last year's hits.

## Copyright Board: Get your wallets out

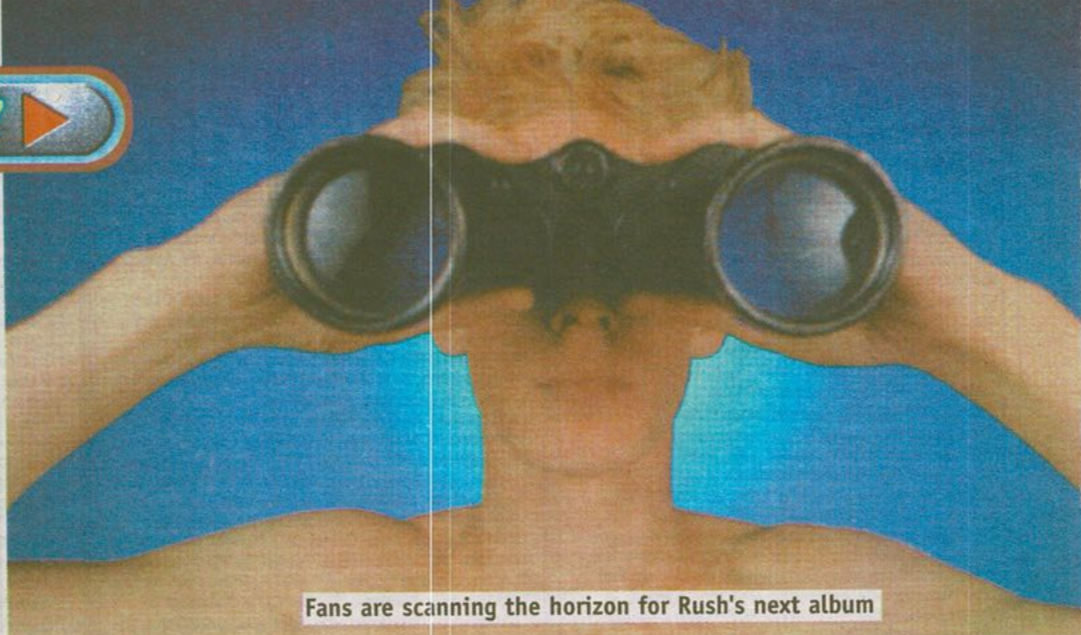
There are plenty of uses for recordable CDs other than burning illegal copies of music, but the Copyright Board of Canada wants to start charging you a lot more for them, under the ignorant assumption that's all they're being used for.

Everyone who purchases a blank CD in Canada today already pays a 21 cent levy on each disc, but the Copyright Board is proposing to nearly triple that amount for 2003-2004, raising the levy to 59 cents.

The tax is currently paid at the manufacturing and distribution level, who then pass these costs along to the consumer. The proceeds of the levy go to the Canadian Private Copying Collective ([www.cpcc.ca](http://www.cpcc.ca)) and are then distributed to copyright-holding Canadian musicians.

The Copyright Board is also proposing a brand new levy on portable MP3 players that would see a levy of \$21 per gigabyte of storage, which would raise the price of a \$599 Macintosh iPod by more than \$100, and would jack the price of a 20 GB Creative Jukebox, which retails for about \$600, by a staggering \$420.

You can read the full proposal at [www.cb-cda.gc.ca](http://www.cb-cda.gc.ca), and you can read up on the fight against it and sign a virtual petition thanks to the Canadian Storage Media Alliance at [www.sycorp.com/levy/index.htm](http://www.sycorp.com/levy/index.htm). ♦



Fans are scanning the horizon for Rush's next album

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# Boss around a starship crew

By ERIK SEBELLIN

As much as we loved the *Star Trek* television series, we really hated the *Star Trek* games. Why? Because they were, without exception, sadly lacking in quality. But, with the most recent *Star Trek* video game, *Star Trek: Bridge Commander*, things have finally started to improve.

You start out as the first officer of the USS Dauntless, a Galaxy class starship of the United Federation of Planets. Your ship is ordered to the Maelstrom, a turbulent area of space fraught with subspace tears and other cosmic phenomenon. When the captain takes a shuttle to visit a new colony, the sun suddenly goes nova, the captain is caught in the ensuing blast and you abruptly find yourself in the captain's chair.

The game is played from the eyes of your

alter ego, the first-mate-turned-captain. The game is rendered in full 3D, somewhat like *Quake*, but you don't actually move around. In other words, you never leave the bridge, and in fact, never even leave your seat, making for a predominately predictable view.

Your job is to tell your officers what to do. For example, you can tell your navigation officer to set course or go to warp while you can instruct your first officer to call Starfleet or signal a red alert. How do you do this? You simply look at the bridge crew you wish to interact with, left click and issue your order. Your crew, in turn, talks to you (incessantly) to give you updates.

Much of the game is like being in a *Star Trek* episode — you meet many races featured in the television series, you hear the great orchestral score and sounds from the show and you have the usual effects during com-

Captain Picard: Hello, Captain. I was pleased to learn that you were given the Sovereign. From all I've heard, you earned her.

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bat, such as a shaking bridge, exploding consoles and dazed and confused crew members strewn about the floor.

But, unlike the television series, game battle is a slow and considered event, reminiscent of submarine combat. For example, engaging in an evenly matched one-on-one battle, just you and another ship, can take five minutes or more. (This type of battle in a space fighter simulation, to contrast, can be over in seconds.)

Why does battle take so long? Because you have to tell your crew what to do and manage your ship resources. For example, you can tell your tactical officer to designate specific ship systems to target, such as impulse engines to prevent the enemy from moving, or to target sensors to make it impossible for an enemy to target you. And you must invest a fair amount of time juggling the amount of power that is being fed to different ship systems, target specific shields on the enemy ship to disable specific systems and manoeuvre your ship to ensure your strongest shields take the brunt of the attack. And, because combat is complex, it means that the beginning player has a difficult learning curve to master.

While the ships are excellent – nicely detailed, faithful to the television series and capable of displaying realistic damage – and the lighting effects, especially during combat, are quite good, the characters, unfortunately, move like marionettes with jagged heads and mouths that look like the old, rough computer simulations when they talk.

If you love the show and you want the incredible level of involvement and detail this game demands, then, by all means, buy a copy. If, however, you don't have the patience to issue orders for everything your bridge crew must do and you prefer action over talk, you may wish to pass on this, the best of the *Star Trek* games. ♦

### more INFO

*Star Trek: Bridge Commander*  
\$69.99  
Activision  
www.activision.com



Requirements:  
Pentium II 300MHz  
Windows 95 OSR2/98/ME/2000/XP  
16MB Video card  
64MB RAM

# NASCAR game more than driving circles

By NESTOR GULA

Many people consider stock car racing to be rather primitive and boring. Despite its huge popularity in the United States, it has never really outgrown its southern rural roots and been embraced by the urban masses. For many people, even race car fans, the prospect of racing a relatively large American car painted like a billboard for 805 km (500 mi.) on an oval, even if it is at speeds of over 290 km/h (180 mph), has no appeal. They think it's Mickey Mouse. This is probably why there are so few NASCAR racing games on the market, but several Formula One games to choose from.

Following in the footsteps of the successful *NASCAR Racing 4*, Sierra Entertainment has released *NASCAR Racing 2002 Season* (NR2002). Although not a great departure from its predecessor, this game is updated with the full 2002 line-up that includes new drivers, cars, paint schemes and sponsors. Looking through the cars on screen I was saddened to see that my favourite NASCAR car was missing. This is, of course, the car sponsored by the makers of Spam and painted to resemble a can of Spam. Seeing it hurtle around a racetrack always made me smile. I have yet to watch a NASCAR race to confirm its disappearance but I feel it should have been included for sentimental reasons. The game does have a paint shop where you could paint an available car to suit your fancy, but the controls and execution are quite primitive and frustrating. After an hour of fiddling I gave up and went back to doing what this game does best — simulating stock car racing.

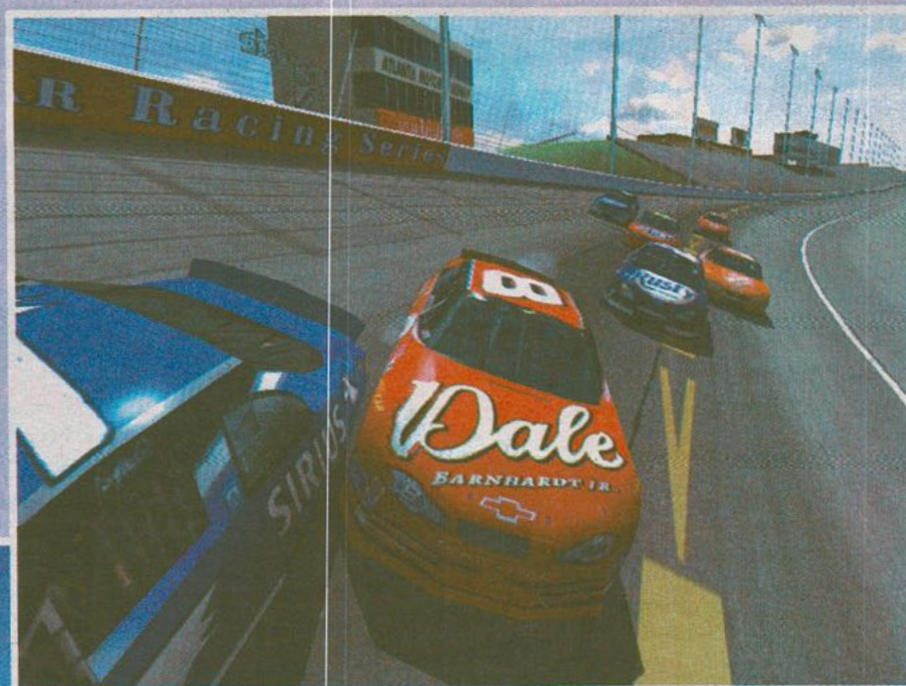
Far from being easy, racing on the ovals is tricky business. While travelling past a wall just inches away at unbelievable speed, it takes all your concentration to keep focused on the proper racing line. The key to good stock car racing technique is knowing when to floor the gas pedal, when to massage it, when to tap the brakes and how to gently coax a large, normally ill-handling car to go where you want it to. Abrupt moves in NASCAR put

you in the wall. There are six driving lessons that give you the basics of driving a NASCAR race car. The tutorials put you in the car and NASCAR cham-



pion Darrel Waltrip explains how you should run each of the 24 tracks included in this game. Going to the testing sessions is where you'll really hone your skills. A great addition to this simulation is the digital steering assistance that gives you the ideal line to take on the track and how hard or soft your foot should be on the gas pedal. A couple of single races and you'll be able to start the championship mode or even go for the free multiplayer option. In the latter, you can race against up to 42 other competitors at Sierra's free online service.

NR2002 is developed by Papyrus Racing games, the developer of perhaps one of the best racing sims ever — *Grand Prix Legends*. True to their form, the developers did a great job with NR2002. The graphics are stunning when displayed at 1024x768. Unfortunately, the game was happiest when I ran it at 800x600, even though it was being run on a Dell Dimension 4300 with a 1.6 GHz Pentium 4, 512



## more INFO

**NASCAR Racing 2002 Season**  
\$64.99  
Sierra  
[www.sierra.com](http://www.sierra.com)



**Requirements:**  
Minimum: Windows 98/ME/XP, 450 MHz processor, 64 MB RAM, 16 MB Direct 3D compatible video card, 8x CD ROM

Preferred: Windows 98/ME/XP, 800 MHz processor, 128 MB RAM, 32 MB Direct 3D compatible video card, DirectSound compatible sound card, DirectInput compatible game controller, 56 Kbps modem, 8x CD ROM

MB memory and a 16 MB video card. NR2002 lets you monitor the frame rate while racing (great, another thing to distract you from driving) so you can adjust the game for performance versus visuals to suit your system.

*NASCAR Racing 2002 Season* is a fun game for NASCAR fans and will even be enjoyed by open minded race car fans who will learn that it's not that easy to drive stock cars well. ♦

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# WW II sims: Lots of reading, little action

By CHRIS TALBOT

Developed by SSI and released to the world by Ubisoft, two new naval simulation games can link up via the Internet or through an intranet and let players go head to head.

Sold separately, *Silent Hunter II* and *Destroyer Command* simulate naval warfare during World War II. In *Destroyer Command*, players take on the role of a captain of a United States Navy destroyer on the open seas against German, Italian and Japanese forces. *Silent Hunter II* puts players in command of a German U-boat that goes up against U.S. and British ships.

In single player modes, players can run through missions or launch into a campaign, but the two games can be used in conjunction with one another in online naval battles.

## *Silent Hunter II*

Have you ever wondered what it would be like to command a submarine? *Silent Hunter II* will give you that chance. Unfortunately, piloting a German U-boat in a simulation isn't quite the same as what is seen in the movies. As the pilot, players will find they will be fighting boredom a lot more than they will fight other ships.

Imagine being cooped up in a sardine tin for months on end and being completely blind every time your ship submerges under the water. Welcome to *Silent Hunter II*. While the game is easy to install, the gameplay is complicated. The 195-page manual is a necessity. Players are advised to read the book from cover to cover and to keep it beside their keyboards in case of emergencies.

To SSI's credit, the game developers obviously spent significant amounts of time researching naval warfare, German U-boats and American and British ships. The game is visually beautiful when you're staring at something more than kilometres of ocean, but simulation games try to re-create something — and the truth is, commanding a submarine is nothing short of dullness occasionally interrupted by combat.

When I first sat down with the game, I was happy to find some training missions listed. Unfortunately, all of the instructions for the training missions are in the manual. The training missions themselves are completely useless when it comes to helping players learn to command the U-boat. I slowly discovered how to set a course, adjust the speed of the engine and dive below the waves. Unfortunately, the periscope still confused me after I finally gave up on the training mission.

For players with a lot of patience and a lot of time on their hands, this game might hold some enjoyment.

## *Destroyer Command*

Compared to *Silent Hunter II* on a fun level, *Destroyer Command* has something that *Silent Hunter II* doesn't have — suspense. Somewhere out below the waves, there is most likely a U-boat loading a torpedo with your name on it.

Just like in the case of the U-boat in *Silent Hunter II*, the controls for the U.S. Navy destroyer in *Destroyer Command* are complicated and take time,

effort and patience to master. Unfortunately, I lacked both time and patience.

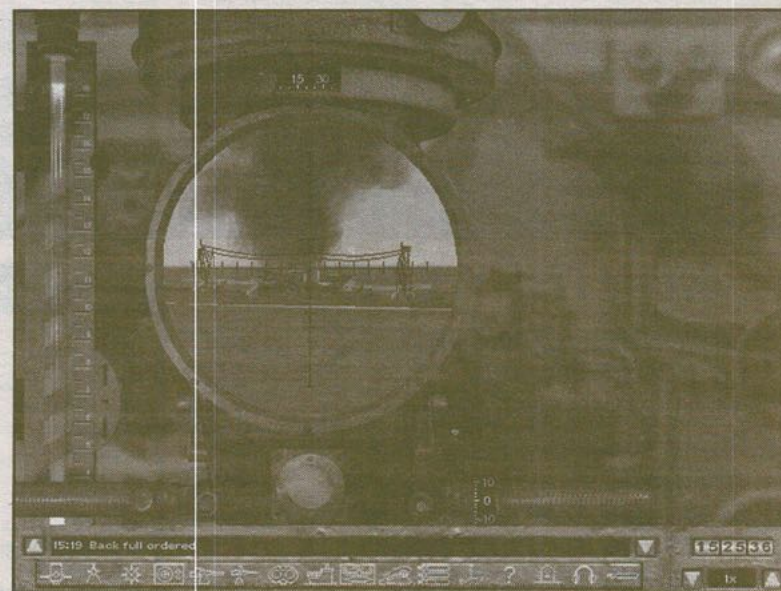
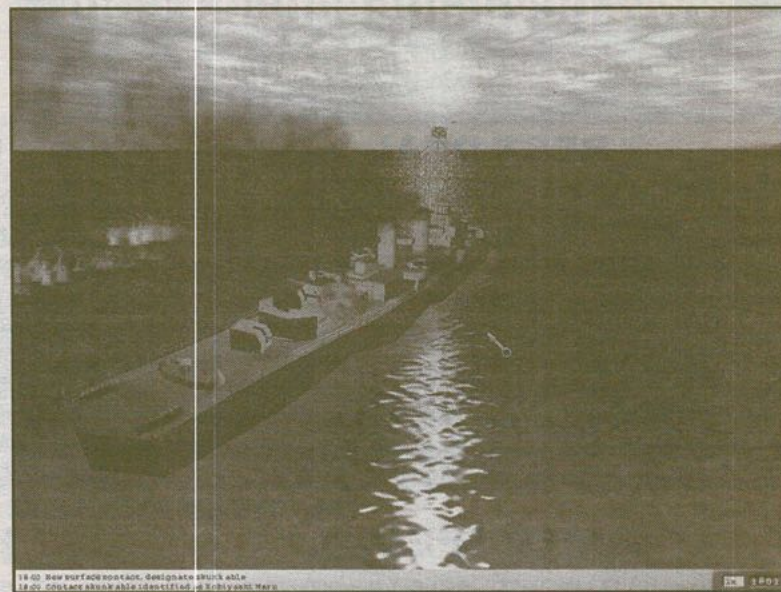
On the plus side, the manual that comes with the game is much smaller than the one for *Silent Hunter II*, weighing in at only 72 pages. Again the instructions for the training missions are in the manual. I'd hate to be the player who loses the manual. "Less reading, more playing" should be the motto of every game producer out there.

Because of a destroyer's inability to dive, players have portholes and windows in most rooms, so they don't have to drive blind. This makes it much easier to change direction, see the water splash past and notice U-boats sneaking up on you. However, the boredom I found playing *Silent Hunter II* is in *Destroyer Command*, as well. Most of the time, you're just piloting the boat, which isn't a very exciting thing to do.

## The final word

Maybe I'm not enough of a fan of simulation games to appreciate *Silent Hunter II* and *Destroyer Command*. Despite the complexity and difficulty of the games, the gameplay itself seems sound. Persistence and patience are assets, for sure.

Some players might be attracted to the games by the multiplayer functions. After all, human opponents are always more fun to play against than computer ones. ♦



## more INFO

**Destroyer Command**  
\$59.99  
SSI/Ubisoft  
[www.destroyercommand.com](http://www.destroyercommand.com)

**Requirements:**  
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64 MB of RAM  
700 MB of hard disk space  
8x CD-ROM drive  
Direct 3D-compliant 3D-accelerated video card  
with 16 MB of VRAM  
DirectSound-compliant soundcard

**Silent Hunter II**  
\$59.99  
SSI/Ubisoft  
[www.silenthunterii.com](http://www.silenthunterii.com)

**Requirements:**  
Pentium II 266 MHz processor  
64 MB of RAM  
650 MB of hard disk space  
8x CD-ROM drive  
DirectX 8-compliant 3D-accelerated video card  
with 16 MB of VRAM  
DirectSound-compliant soundcard



# Do more with your DVDs



It's a good time to be a gamer. Electronic diversions seem to be everywhere these days, be it on cell phones, watches, PDAs — even DVD movies.

That's right — dozens of your beloved DVD movies feature supplemental games to play on your TV or PC.

But are they any good?

Well, they're no *Civilization III*, but sometimes you can find fun games to poke around in for a few hours. The following are a handful to look for.

## Shrek

There are more than 15 games on disc one of this popular DreamWorks title, ranging from the lame Mirror Mirror on the Wall (ask a question, get an answer), to the reasonably fun

Shrektacular Trivia (though it's cleverly interlaced with movie footage), to the entertaining Shrek Pinball, and Gingerbread Hangman.

## Fast and the Furious

This popular drag racing film from Universal (great audio, crappy acting) has a little-known demo of Activision's *Supercar Street Challenge* embedded on the disc, offering players two cars and two tracks to race on. It's a fun, arcade-like racing game, and a fitting addition to the fast-paced flick.

## Jurassic Park III

Knowledge Adventure packed a number of titles for one or two players on



this DVD, including Jurassic Park III: Decoding Danger, Jurassic Park III: Predator Pursuit and Jurassic Park III: Racing Ravine. Young kids will likely enjoy these short diversions more than adults.

## Practical Magic

The game on this Warner Bros. witch flick is a hidden Easter Egg, so it's not listed on the back of the DVD box. Insert the second side of the disc, go to Special Features and then press Enter/Select over the word Cauldron. The goal is to brew a secret potion, like Sally (Sandra Bullock) and Gillian (Nicole Kidman) did in the film, by selecting the right ingredients in the right order. Clues to which herbs to use are given in other areas of the DVD menu. Not bad for a chick film.

## Lost in Space

Another hidden game can be found on this remake of the popular '60s TV series. To play the secret trivia challenge, pop the DVD into the player and select Features and then Your Mission. Now, take control of the Jupiter 2 space ship and lead the Robinson family to

Alpha Prime. Entering the correct info about the movie, cast and original series into the ship's onboard computer activates the hyper drive. Completing the entire game correctly unlocks a very funny reel of outtakes from the film and other gags featuring the cast.

## For Love of the Game

'Tis the season to test your baseball knowledge. This DVD features a trivia game entitled On the Mound. If you get all 12 answers correct before getting three strikes, you'll hit a grand slam. But instead of high fives from your team-mates, your reward is *Slide, Babe, Slide*, a 15-minute black and white short film about Babe Ruth from 1931.

## And more...

There are a handful of other games to look for in these following DVDs: *The Lawnmower Man*, *Romeo Must Die*, *The Mummy Returns*, *Tomb Raider* and *The Rocky Horror Picture Show*.

Marc Saltzman is the author of the new book, *Game Design: Secrets of the Sages*, 3rd Edition (Pearson Education), and has just published a CD entitled *Marc Saltzman's Top 250 Games for the Palm OS*. ♦

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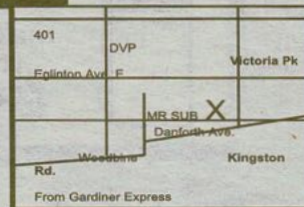
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# Play along on the PGA Tour with Tiger Woods

By CHRIS TALBOT

The golfing season is just about to start, and golfers of all calibre are itching to tee off. Although it's not quite the same as going out on the course, Electronic Arts' *Tiger Woods PGA Tour 2002* might keep you occupied until the courses open up. Besides, how else will you ever have the chance to play a round with the man who made golf cool?

Even though the Toronto area has some nice golf courses, wouldn't it be cool to play the greens at a famous club used on the PGA tour? The game's course lineup includes places like Pebble Beach Golf Links, Poppy Hills, Spyglass Hill and The Royal Birkdale Golf Club in England.

Players can compete in matches and tournaments as professional golfers like Tiger Woods, Justin Leonard, Brad Faxon, Notah Begay III, Vijay Singh, Jesper Parnevik, Colin Montgomerie and Lee Janzen; as one of several different amateurs; or as a golfer they create using the golfer creation function in the game. When creating a golfer, the game lets players customize things like ability

level (amateur, professional, tour and championship), what the golfer looks like and what kind of equipment he carries.

Simple to install and easy to learn, the game controls for *Tiger Woods PGA Tour 2002* are keyboard- and mouse-driven. It will take some practice to get good at the game, but learning to drive, chip and putt will only take a few minutes. In fact, the game is so self-explanatory that the manual hardly seems necessary, although the charts at the beginning of the manual detailing all of the game control commands are helpful. The most important commands are listed on the back of the game's jewel case for quick reference.

There are nine game modes available – practice, stroke, tournament, Skins game, shoot-out, match play, foursomes, fourball and multiple year PGA tour seasons. A caddy book option is available to get the best tips and information on how to make great shots. Players can also practice their swings at the driving range, chipping area, putting green and practice holes. All this game needs is a miniature golf area and it would be complete (that's a joke, kids).

Golf commentators David Feherty and Bill Macatee add more realism to the PGA environment through their on-going commentaries on each round of a tournament.

## More Goodies

If this isn't enough for you and you want more control over your golfing environment, the Course Architect tool allows players to create a golf course of their very own. Unfortunately, the manual offers no detail on how to create a course, so you have to learn by doing. If you want to try other courses but don't have the time to create your own, the Course Utilities tool will allow you to import courses that other players have made and uploaded to Internet sites.

One complaint that has been popping up on the EA Sports message boards is transparent foliage. When stuck in the trees (and even good golfers slice once in awhile), many players have found that trees and bushes become transparent and you don't know they are there until they've cost you a stroke on your



score. Hopefully this is something EA will fix in a future patch, but for now, it's obviously annoying a lot of players. For now, the way to avoid this seems to be to stay out of the trees. Good luck.

Otherwise, *Tiger Woods PGA Tour 2002* is a fun game that only has a fraction of the frustration I feel every time I pick up a real golf club. ♦

## more INFO

*Tiger Woods PGA Tour 2002*

\$59.99

Electronic Arts

[www.ea.com/easports/platforms/games/tigerwoods2002/pccd.jsp](http://www.ea.com/easports/platforms/games/tigerwoods2002/pccd.jsp)

### Requirements:

Windows 98/ME/2000/XP (95 and NT not supported)

Pentium II 400 MHz or AMD Athlon 500 MHz processor

64 MB of RAM (128 MB RAM for Windows XP/2000)

8x CD-ROM drive

500 MB free hard disk space plus space for saved games and Windows swap file

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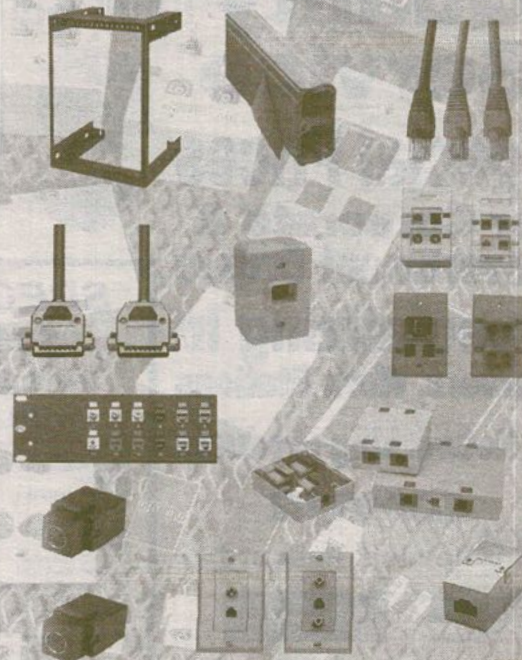
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# Renegade shines in multiplayer mode

By ERIK SEBELLIN

The plot of the first-person shooter *Command & Conquer: Renegade* revolves around two factions – the GDI (Global Defense Initiative), an aggressive arm of the UN, and the Brotherhood of NOD, a terrorist organization bent on world conquest. You play the game in one of three ways. First, you can play as Major Havok, an elite commando of the GDI, in a scripted campaign. As Major Havok, it is your job to perform missions, such as rescuing civilians, blowing up everything from enemy troops to vehicles along the way.

Second, you can play *Renegade* multiplayer online. In this team-based game, you choose a skin, align yourself with the GDI or NOD and try to destroy the other team's base. In the third option, you again choose your skin and alliance, but this time, you play offline against bots (computer-controlled characters) for practice.

To tell the story, *Command & Conquer* uses cinematics rendered with the in-game engine. Westwood has a background filming live actors and this influence shows, because not only are

the camera angles the type you would find in live-action dramas (such as in a movie), but the characters move realistically, just like real actors.

As the game unfolds, you get the chance to operate multiple vehicles, including the NOD Buggy and Flame Tank, as well as the GDI Humvee and Mammoth Tank. All the vehicles are easy to get and operate – you simply walk up to one, hop in and use your arrow keys and mouse to steer and aim.

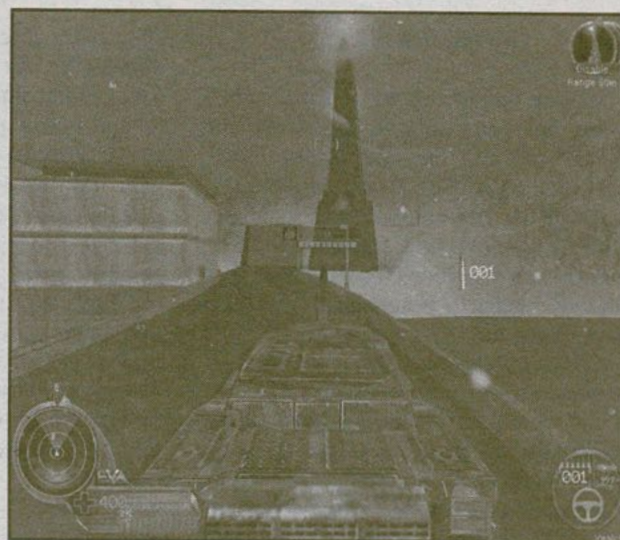
In fact, despite the somewhat cartoonish, low budget feel of the game, the graphics are quite fantastic. The characters are animated beautifully, weapons offer some nice effects and the vehicles look great.

Unfortunately, as with the original *Command & Conquer*, the enemy artificial intelligence (AI) is dumb as a door-knob. For example, in other first-person shooters, if you snipe one of two guards, the other guard will often run and sound an alarm. In this game, however, if you snipe one of a pair of guards, the other just stands there as though nothing happened. However, on the plus side, if a guard is shot from up-close – so it sees the shooter – the surviving

guard will run toward the shooter, weaving left and right to make himself harder to hit.

Another negative occurs when you die. Every time you die in the single player game, you must wait during an immense reload period, whether you restart the mission or restart from a loaded game. Even worse, if you did not have the forethought to save midway through a mission, if you choose to restart, you will do so from the start of the mission – incredibly annoying if you had the misfortune to get yourself killed just before the end.

The bad news is that the single-player version of *Command & Conquer: Renegade* is merely a ho-hum first-person shooter. The good news, however, is that the multiplayer version is so good, this is destined to be one of the best games of this year. ♦



## more INFO

*Command & Conquer: Renegade*  
\$59.99  
Westwood Studios  
www.westwood.com



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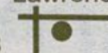
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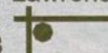
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# InDesign lets you get into design

By NESTOR GULA

Desktop publishing on personal computers has come a long way since its humble roots in the mid 1980s. There are a plethora of DTP software packages available to the computer user. Some word processors and design software packages also include DTP functionality. But while even 10 years ago DTP meant print this is not the case today.

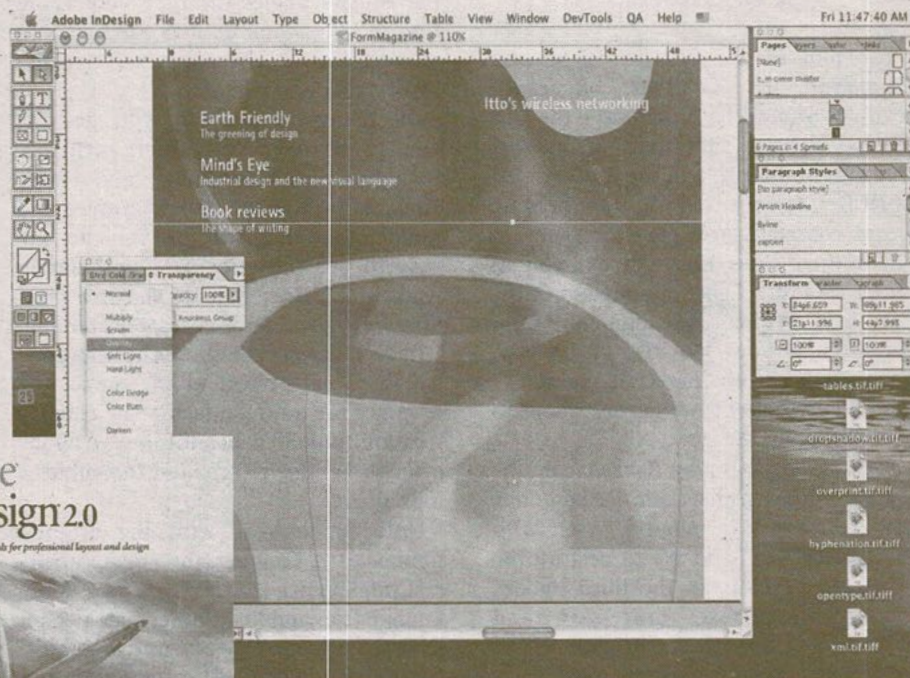
Today, publishing means everything from print to Web to electronic methods of delivering the message. Very often the need is for the same information to appear in different formats. This need is not exclusive to large corporations or high-end business users. Small and home-based businesses and even regular computer users have the occasional need to create the same documents in multiple formats.

Adobe's *InDesign 2.0* was released near the end of January in a relatively low-key announcement. It should be noted right away that *InDesign* is geared to be used by the design professional and is not intended for the home user.

Adobe has three distinct DTP products, *PageMaker*, for the home and business user, *FrameMaker*, for corporate publishing needs and *InDesign*, for professional designers.

In the world of professional page design and layout *Quark XPress* is more-or-less the standard package. On a personal note, most magazines, including this one, use *Quark* for the design and layout. *InDesign* is Adobe's entry into this arena. The first two versions of *InDesign*, 1.0 and 1.5, did not set the design world on fire, although many graphic designers admired *InDesign's* integration with Adobe's *Illustrator* and *Photoshop*. These two programs, especially *Photoshop*, are effectively standards in the publishing world.

The integration between these two programs and *InDesign* is enhanced in this version. You can now import *Photoshop* files without having to flatten



the image first. *InDesign* recognizes *Photoshop* layers and any transparencies in them. This, in

turn, allows the designer great leeway in formatting images with text because hard clipping paths are not the only way to go. The images can now be softly merged into, or out of, the text. *Illustrator* layers are also preserved. *InDesign* also contains a great set of its own effects and transparency controls. You can apply drop shadows, featherings to text or images. Special effects can be applied to objects by combining blending modes with opacity settings. These blending modes include Darken, Lighten, Hue, Saturation and Luminosity. They work just like similar modes in *Photoshop*. In fact, if you are quite familiar with *Photoshop* or *Illustrator* you will have a jump start in learning and mastering *InDesign*.

My favourite enhancement in *InDesign 2.0* is the tool that creates tables. For some reason tables have always been a royal pain to create in DTP programs. In the March 2002 issue of *Toronto Computes!* we ran a two-page table comparing different cell phone packages. This table was originally created in *Microsoft Word*. *Quark* would not read the information so we had to do many conversions to get the table in proper shape. Although we never really kept a timer on the process, I would have to estimate about 10 hours were spent just formatting the table to

get it ready for print. This is a great chunk of time in our production schedule. *InDesign* has a table function built in. It imports styled *Word* and *Excel* tables, as well as database files, strips them of unnecessary and confusing formatting and puts them into a table that can be flowed, just like a text file, from page to page. This might not be as sexy as all the graphic manipulation that you can do in *InDesign* but it sure is a great solution to real world publishing problems. You can even refine how the table looks by specifying row height and column width, applying colour fills to rows and columns and merging cells.

## more INFO

**InDesign 2.0**  
 Adobe  
[www.adobe.com](http://www.adobe.com)  
 \$1,050  
 \$225 for Upgrade  
 Users of *PageMaker 7* can upgrade directly from Adobe for US\$299

**System Requirements:**  
 PC: Windows 98/ME/NT4.0 (Service Pack 6)/2000 (Service Pack 2)/XP, equivalent of Pentium 2 processor or higher, 128 MB of RAM, 105 MB of available hard disk space, CD-ROM drive, Video card that supports 256-colour at 1024x768 monitor resolution, 24-bit, high-resolution display recommended, PostScript Level 2 or 3 printer for PostScript printing

Macintosh: Mac OS 9.1/9.2x/OSX version 10.1, Power PC G3 or G4 processor, 128 MB RAM with virtual memory turned on, 240 MB of available hard disk space, CD-ROM drive, Video card that supports 256-colour at 1024x768 monitor resolution, 24-bit, high-resolution display recommended, PostScript Level 2 or 3 printer for PostScript printing

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Since its inception, *InDesign* has always had great typography tools. The Paragraph Composition tool allows the reflowing of text to adjust the spacing to get an even look for the text. Version 2.0 has expanded support for OpenType fonts and even includes some of these fonts (Adobe Caslon Pro, Adobe Garamond Pro, Cafisch Script Pro and some Japanese fonts, as well) in the package. OpenType fonts give the user many more characters (glyphs) in a typeface than the 256 contained in normal fonts.

Adobe sees *InDesign*'s strength in its

ability to save document's in many formats. It will export a file to PDF (either *Acrobat 4* or *5*) format, HTML document, Postscript file, SVG (Scalable Vector Graphic) and XML (eXtended Markup Language) document. The latter is the way publishing is perceived to be moving. XML allows the tagging of objects and text and the importation of fully formatted text or objects into other documents. Tagged XML items may be then moved about between different XML programs for reuse. A formatted XML text from *InDesign* can be dropped, all formatting preserved, into

Adobe's Web design program *GoLive*. No only is *InDesign* able to save in many formats but it will also open and import documents from many sources. It will import most PDF documents and will open *PageMaker 6.5* and *7.0* documents as well as documents created by *Quark XPress 3.3* and *4.1x*. The latter is no doubt to attract *Quark* users and ease the transition.

Will *InDesign* succeed in becoming the standard for DTP? It is too soon to tell. *Quark* is just releasing version 5.0. Beta copies have been available for a while. *InDesign* is a very good program

and has much more power and flexibility than any other DTP program I have ever used. However it also requires a fairly state of the art computer to run it. Incidentally, I tested it on a Mac iBook running OSX and a Dell Dimension 4300 with a 1.4 GHz processor.

Unfortunately, *InDesign* will not be judged on its strength as a program but its success in the market. Because it is entering a mature marketplace it has to win converts as opposed to getting new users. The market success of *InDesign 2.0* will depend on how many converts it gets. ♦

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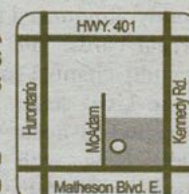
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# Extigy: Audio goes outside the box

By SEAN CARRUTHERS

Are you resigned to the fact that your notebook computer's audio isn't very good, and that you'll never be able to use it to play all your MP3 files at your upcoming party? Upset that your home PC has lousy onboard audio and no slots available for a new and improved sound card? Well, Creative Labs may have just the deal for you!

Already famous for its SoundBlaster line of audio cards, Creative Labs recently announced the Audigy series of internal cards. The cards improved on the multi-channel sound already offered by the Live! series of cards, increased the signal-to-noise ratio to more than 100dB. Now, with the release of the Extigy, Creative has brought the same quality to your PC or notebook in a design you can plug into a USB port.

The Extigy looks like a little home audio component, but substantially smaller. It adds two optical connectors, jacks for line in, microphone and headphone, MIDI in/out and SPDIF in. The box is designed for use with a 5.1 speaker set, which is great for gaming or for DVD movie playback. The Extigy also comes with a remote control, so you can change tracks or adjust the volume from across the room.

Even though it's smaller than a home audio component (like an amp or cassette deck, for example), it's still going to take up some space on your desktop. Though a bracket is provided for setting the Extigy on the desktop vertically, there will also be a bit of a wire tangle with the power cord and the connection to your desktop and speaker set. If you're adding it to a desktop PC, that's not necessarily an issue, but if you are

using it with a notebook, be forewarned: It's not necessarily as portable as you'd want. It's better to leave the Extigy and speakers on the desktop when you take your notebook on the road and re-hook when you return.

How does it sound? Well, pretty darned good. We tested it out with Creative's Inspire 5300 5.1 speaker set, and the audio quality was excellent. The USB 1.1 connection did an excellent job of getting the data to the Extigy without deterioration, and the only problem we had was with digital audio extraction from the CD player on our notebook. (As with any other computer product, you have to make sure all the rest of your components are up to snuff to ensure proper operation).

The Extigy is compatible with Windows 98SE, 2000, ME and XP, and obviously, you'll need a USB 1.1 con-



nection on your computer. It requires a processor running at least 350MHz, but you'll probably want something faster if you want maximum performance. Minimum memory requirement is 128MB, though you can squeak by with only 64MB on a Windows 98SE system. As always, we'd recommend higher specs for trouble-free performance. ♦

## more INFO

SoundBlaster Extigy  
From: Creative Labs  
<http://www.soundblaster.com>  
Estimated price: \$250

# Audiotron: MP3 at home

By SEAN CARRUTHERS

If you're a rabid fan of digital audio, there comes a point when you have so many MP3s that you want to start listening to them at home as well as on the road. You've put the effort into collecting them and ripping them, but you can only upload so many to the portable player, so why aren't you taking advantage of that library?

For a lot of people, it's probably that they don't want to sit in front of the PC every time the urge to listen to music strikes. Turtle Beach recognized that quite some time ago--it introduced the Audiotron home MP3 appliance back in 2000, and it's been going strong ever since. It's designed like a home audio

component for a reason: It's supposed to be hooked up to your home stereo system so that you can enjoy your MP3 collection in the same place you enjoy your CDs and records. You can hook the Audiotron to your home system using standard RCA connectors or you can use the SPDIF digital output if your stereo supports it. A remote control is included.

To get the Audiotron to work, you will need to connect it to at least one PC that's powered on and contains a shared directory filled with audio files. The Audiotron hooks to your home network via 10/100 Ethernet or HomePNA telephone networking and will crawl through your network looking for shared directories with audio files. If

you're concerned about security, the Audiotron supports passwording, so you can keep out people that shouldn't be in your shared files.

One thing that's been added since the introduction of the Audiotron is support for streaming audio, allowing users to tune in to select Internet radio stations. (Those of you who got the first edition can find a ROM update for the Audiotron at the Turtle Beach site, which will add this function.) You manage your radio stations using a Web interface from your PC, and the Audiotron will pull down all relevant data from the Turtle Radio server. You can choose from a number of stations already listed, or you can add your own, so long as they are compatible (the serv-



er currently features Shoutcast, Icecast and Windows Media streams). You can access these streams even when your PC is shut down, as long as your home network is still able to access the Internet.

It all adds up to an excellent way to bring digital audio capabilities to your traditional home entertainment center. ♦

## more INFO

Turtle Beach Audiotron  
From: Voyetra Turtle Beach  
<http://www.audiotron.net>  
Estimated price: \$480 (US\$299)

## Cybraian Computer

2788 Bathurst St., North York  
Tel: 416-781-0496  
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300W ATX Case  
Win98 K/B, Mouse, SPK

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56K Fax/Voice Modem  
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Mouse, Speaker

#### \$669

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48x AOpen/1.44FDD  
TNT2 32MB Video  
16 Bit Stereo Sound  
56K Fax/Voice Modem  
300W ATX Case  
Compaq Internet K/B  
Mouse, Speaker

### \$899

#### Intel P4 1.7GHz

MSI K7T Turbo2 266MHz  
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Compaq Internet K/B  
Mouse, Speaker

# It's not the big stuff...

Alan Thwaites

The World Is My Cubicle



On a long ride with my cycling club last summer, the conversation turned to computers. (We're talking a 600-km, 39-hour ride here, so there was a lot of time to talk.)

The subject matter was pretty general, mostly to-ing and fro-ing about how much better communication had become among club members now that we had a club Web site and mailing list ([www.random-neuronsontario.ca](http://www.random-neuronsontario.ca), for those who are interested). I was mostly listening intently, curious about what everyone was saying. It caught me by surprise when one club member opined that he didn't think computers really made life easier for anyone. It was a pretty bold statement, so I felt obliged to follow it up.

"No improvement at all?" I asked.

"Nope," came the reply. "They've just made life a lot more complicated."

Now, I have to emphasize that the fellow who made this comment isn't your standard-issue, backward-looking Luddite. He's well-educated and professionally employed (an engineer, no less), and lives in the middle of the big city. He's bright, personable and up to speed on what's going on in the world. And he's not someone who just makes noises — he means what he says and says what he means.

OK, I thought, this deserves a response. And who better to offer one than me? Trouble was, I'd been cycling for about 10 straight hours at that point, and my brain wasn't working at its usual expansive, lightning-speed, cognitive best.

The only answer I could come up with was to suggest that, if nothing else, banking was easier than it used to be in the dark old days. Remember standing in those awful lineups at your local bank branch, I asked? Remember trying to find a time to visit the branch that was within "banker's hours"? Remember those weird little passbooks, where all the vital information about your meagre savings appeared in smudged, indecipherable print? Isn't the world a much more efficient and pleasant place, I asked, because of the wonders of online banking?

"Nah," said my cycling friend. "It's as bad as all the other computer technologies. Always screws me up. Never know where I stand."

I was dumbfounded. And I found I couldn't come up with any other examples of the blessedness created by computers. That's partly because we were approaching a huge hill. Time to buckle down and let legs and lungs and do the necessary work.

We never got back to that conversational thread. But I've wondered — and worried — about it ever since. Computer technology has changed my life in so many ways that it staggers me to even think about what things were like without a PC. And I constantly wonder at how the world I live in works so very differently because of the presence of computers and their corollary technologies. Good heavens, think of e-mail, if nothing else! How about the magic even the numerically-challenged (such as yours, truly) can do with a spreadsheet? How about being able to search the Web for the meaning of a word, for stock market news, for pictures of your mother-in-law's cat?

Over time, I realized that I hadn't been able to come up with a compelling

response to my friend's comment because I'd been looking in the wrong direction.

My mistake was looking for something big and world-changing. Of course, computers have changed how the world works. Socially, economically and politically, the lives of the world's citizens have been radically affected by the advent and use of the computer. But where the changes really matter, I think, are in the small differences, not the big ones.

A senior citizen doesn't have to venture out into a Winnipeg winter to do her banking. Rabid cycling fans in Canada can follow the action of a road race in Spain in real time. New parents in Toronto can e-mail photos of the recent arrival to the folks in Nova Scotia. People connect with other people, share thoughts and feelings, make plans and simply continue doing what they've always done. But it's all a little faster, a little easier and therefore a little more satisfying.

I plan to convince my friend of this on one of this season's long rides.

Alan Thwaites, a TC/ Contributing Editor, is a freelance journalist who writes about computer, communications, and business technologies. He can be reached at [praxis@pathcom.com](mailto:praxis@pathcom.com). ♦

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# Rounding out my Palm PDA-based office environment

Kevin Linfield

Linfield's Line

My Palm PDA-based office is almost complete! With the addition of some carefully chosen accessories, I have taken my personal digital assistant (PDA) to the next level. Not only do I write most of my articles on my Palm, I also research information on the Internet, print a large variety of data, take meeting notes, keep my company's client database up-to-date and even play a wide assortment of games. Just a PDA? Ha! In many cases, these tiny handheld devices can replace a notebook computer. Although I've joined the Palm bandwagon, note that equivalent devices for Windows PocketPCs are also available.

## Keyboard

Although you can input data manually with your stylus, in reality the most important addition to a PDA for entering large amounts of data is a keyboard. There are many different types of keyboards available and I discovered that none offer me everything I want. So I ended up purchasing both Landware's GoType! Pro ([www.landware.com](http://www.landware.com)) and Palm's own folding Portable Keyboard ([www.palm.com](http://www.palm.com)). Each has their advantages and disadvantages.

The GoType Pro! is better for situations where I need to HotSync (as it has a built-in cradle) or if I want to type on a soft surface such as my lap. The Palm Keyboard is better in situations where I will be working at a desk or another flat surface for a while.

Both allow me to easily enter data into my word processor, spreadsheet, or the multitude of other applications I have installed.

Note that even with the keyboard you still often have to use the stylus.

## Modem

Although just about any modem can be connected to a PDA with the proper adapter, I bought Palm's own 33.3Kbps modem ([www.palm.com](http://www.palm.com)).

Securely attaching to the bottom of my PDA, I feel it offers the best and easiest method to send and receive e-mail and for general Web browsing. It uses its own batteries and I have had no difficulties connecting to my Internet Service Provider (ISP) throughout Canada. Using the freeware *Eudora Internet Suite*, I am able to text-mode browse the Internet and send and receive e-mail. *AvantGo* keeps me up-to-date with information customized for viewing on my PDA, and *Yanoff* lets me access Usenet newsgroups. And note that although I utilize e-mail, commercial fax software is available should my needs change.

## Printer

Since every office needs a printer, wouldn't it be great to print directly

from your PDA? I recently bought SiPix's Pocket Printer ([www.sipix.com](http://www.sipix.com)), which supports printing via the Palm's infrared port (or the serial port of any notebook computer).

Although it only prints on A6 paper (approximately 1/4 the size of a regular sheet) it allows me to print my addresses, ToDo lists, notes and articles wherever I go.

Note that not all Palm applications support this printer by default, although there are commercial device drivers for many common business applications. Having the printer is also great for sharing information with coworkers when you are on business trips, although be warned that it is not something that can produce quality output for clients.

## Dual mode pens

When going back and forth between Palm and paper, it can be a pain switching pen and stylus.

There are many dual mode pens and

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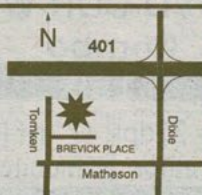
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pencils on the market, and I've had a positive experience with a number of them.

You can get a combo pen/stylus that fits into the slot on your PDA, or you can go with a regular pen-sized unit. Either way, with a quick twist or the removal of a cap, they make working with both PDA and paper easier.

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What would the portable office be without something to help you kill some time? Maybe something that helps you kill aliens! WorldWide

Widget Works (www.palmgamepad.com) offers a GameBoy-like attachment for the Palm.

Playing action games takes on a whole new dimension with this device, which attaches to the bottom of Palm III (and compatible) units. I love this product!

So there you have my personal Palm-based portable office. Whenever I go on trips, or even when traveling by train or by plane, my Palm is so much more than simply a personal digital assistant (PDA). It truly is my portable office. ♦

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# Apple's new digital lifestyle

David Rosen

Mac Rant



It's no coincidence that Apple's most recent computers are built around powerful graphics machines, futuristic flat screens and space-age industrial design. After all, Apple introduced the Macintosh, the world's first multimedia computer, over 18 years ago. Perhaps we didn't know enough to call it a "multimedia" machine at the time, but we all knew the Mac's graphical user interface was very different from the command line codes that propelled other computers in the market.

Only recently, however, has Apple truly realized what it has on its hands. Rather than a powerful computer that can write your memos, access your e-mail, crunch your budgets and perform other, well, computer-related tasks, the

Mac has finally come into its own as a hub of a new digital lifestyle. As we say in marketing, this is a significant paradigm shift.

Now, I'm not knocking traditional computer applications such as word processing, e-mail or spreadsheets. In fact, I spend about 10 hours a day working with these three very computeresque applications. But Apple's new positioning has really got me thinking about how we use computers – and how we will use them in the future.

Rather than typing numbers or words into a keyboard so we can later print them out on pulped, bleached pieces of trees, we'll be relying a lot more on speech recognition to capture information and flat screens to display it – and reserve printing for important keepsakes.

Thus, the new iMac really grabbed my attention. Not only is its outward design very cool, and thus, likely to capture the imagination of millions of people, it also has been built from the ground up to be the centerpiece of Apple's new digital lifestyle metaphor. The iMac

comes bundled with a slew of software applications such as iMovie 2 (for entry level movie production), iDVD 2 (Apple's DVD-R creation application), iTunes 2 (MP3 music playback) and iPhoto (digital photography storage and organization).

Without much fanfare, Apple is moving from a traditional computer company into something much more. It is moving into the future. This may sound a trifle corny, but I think Apple is really onto the fact that Canadians are a nation of electronic gadget lovers.

## Digital lifestyle epiphany

But my digital lifestyle epiphany came a few weeks ago when I was chatting with two folks from Apple about iPhoto. With its simple but elegant interface, iPhoto makes it easy to import, edit and print digital photos, as well as organize and manage an entire photo collection containing thousands of pictures. Perhaps the best news of all is that iPhoto is available as a free download from Apple's Web site.

iPhoto lets you view your photos in

full-screen, cross-dissolved slide shows accompanied by your favourite music; quickly create custom Web pages of your photos; e-mail your photos to friends and family; order professionally-processed Kodak prints and enlargements online; or – and this is what really impressed me – easily create and order a custom-printed, linen-covered hard bound book of your photos online!

You simply choose one of the six supplied book designs and iPhoto will automatically create a custom book of photos. Each page can be further customized to present one, two, three or four photos. You can then order the snazzy, hard bound book of photos online, for just US\$29.99 for the first 10 pages and US\$3 for each additional page (prices will likely drop once Kodak Canada gets involved in the project).

Will more than just early adopters embrace this new digital lifestyle? I'm guessing they will.

In fact, I think we're at the dawn of the new adventure for us and Apple. A digital adventure built around the new Mac, of course! ♦

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By MARA GULENS

Somehow evaluating children's books seems so much easier. Aphorisms aside: If the cover's off, that's often reason enough to forgo the contents. Flip open the book, check out the graphics, scan the text. Then either buy, borrow, even return if necessary.

If it were only so easy with children's software! Not only are we forbidden to crack open the package, we can't even try it out, not to mention return it. Since a CD-ROM doesn't stand a chance in heaven without a great cover, judging according to looks isn't a good idea, either.

So how does one choose children's software? Here are my tips, along with some additional insight from Jennifer Penney, manager of The CD-ROM Store.

## Talk to friends

People who know I review kids' software will often ask what I recommend. My first question to them is: For whom? Your three-year-old daughter? Your ten-year-old son? It makes a difference.

Friends are the best source of information on kids' CD-ROMs.

They'll tell you the truth, especially if they think they sunk money, and even more so if they know they scored.

## Go to the source

Companies are realizing it's worth giving players a chance to see what their product is about and I suspect this will become more popular with time. Go to Learningco.com to see what you can do with Kid Pix Deluxe. Better yet, go to [www.kidpix.com](http://www.kidpix.com) and try out an online version.

Penney imagines an even more exciting scenario, where producers would allow kids to try out titles for free online. In this way, "parents would know whether the title actually engages their kids to, for example, save the world by solving math problems. This would also help parents determine ahead of time whether the title will in fact run on their home computer," she says.

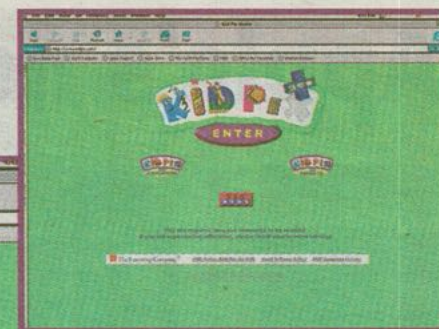
Like movie trailers, computer game

demos show you the best (fortunately, they can't show anything better!). If you don't like what you see, move on.

## Read reviews

Besides the reviews in *Toronto Computes!*, there are gazillions of others. Just beware who sponsors them, remember opinions differ and take everything with a grain of salt. With time you'll learn whom to trust.

There are even forums (for example,



[www.childrenssoftware.com/forum](http://www.childrenssoftware.com/forum)) where you can read what other kids and parents have to say. An excellent Canadian source is [www.learningvillage.com](http://www.learningvillage.com).

## Have the kids try it

If someone owns a great game you're considering buying, try it out!

My sister-in-law was convinced a game I was reviewing would be perfect for her six-year-old son. After ten minutes, it was clear the game was waaaaay too scary for this individual.

## Things to look out for:

### 1. Age and skill appropriate.

Most kids' software ratings span a four-year age group, such as two to six or eight to 12, and most often they're on

continued on page 67

## Let your imagination go wild.

Submit your computer-generated artwork, altered family photos, or any other creative artistic endeavours, along with the form below, by May 1st, 2002. Anything goes but keep it clean. All artwork must be submitted in hard copy, no larger than 11" x 14" (no disks or e-mails please).

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# Clicking's where this game's at

KIDS

By MARA GULENS

Sometimes game developers forget what their target group is all about. Take pre-schoolers. No, they're not master readers and writers. Yes, they like their actions to yield quick results.

Disney's *Rolie Polie Olie: The Search for Spot* gets high marks for catering to the two-to-five crowd in some respects,

but falls short in others. Here's why.

*Rolie* gets bonus points for a quick introduction that pulls players right into the game — sans sign-in. About time! This definitely makes life easier for the two- and three-year-olds I know. On the other hand, this means the game can't be saved, so that each time kids play, they have to start from scratch. This may lead to questions like, "Didn't I

clean up that room last time?" or "How come the fridge is tipped over again?"

Once in *Olie's* house, a brief introduction lays out the goal of the game: Find Spot. Now kids can start clicking, and *Rolie Polie Olie* is a clicker's paradise. Click on a lamp and it turns off; click on the toaster and bread flies out; click on the fridge, the door opens — more clicks and you can remove the food.

Clicking on certain items also leads to mini-movies and games, but without specific markers or icons, it's initially hard to tell where that will be. For example, in the living room you click on an object, Telly, to play a game; in the kitchen you click on Olie's sister. While the movies are short and fun, they interrupt clicking because you can't click while in movie-mode.

This is hard because who wants to stop and wait while you're having so much fun?

Unlike other popular kids' games, this house has a layout that makes sense — so kids should be able to make their way around without getting lost. In each room they have to right a piece of furniture that Spot has knocked over and then play a game.

Ah, the games. Somehow they bring to mind a group of developers in a corporate cafeteria setting, scribbling ideas on napkins. Next time maybe they should look to elementary school playgrounds for inspiration.

Telly Builder is a strange game

(you can see a demo version at [www.disneyinteractive.com](http://www.disneyinteractive.com)) where objects are dragged onto an outline in order to create a goofy vehicle. Kids have to imagine what a table looks like tipped sideways



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KIDS

Clicking's where this game's at  
continued from page 65

or what a shower curtain looks like as it blows in the wind. All that just to create a spaceship from a sofa, lamp and garbage can! You may also tire of Olie's "waytago," and "you're the bestest" – but there's no way to mute the sound.

Canister Can-Can is a fairly complex music-making program, found (but not so easily) in the kitchen. The canisters neatly represent musical notes, and you can click on the tap and kettle for extra sounds – but it won't keep kids occupied for long.

Crayon Crisscross is perhaps the most fun, basically because it's based on something kids know from the real world – colouring. Kids have to grab crayons that move over the screen – and then click on the circle they want coloured. As the levels of difficulty increase, kids can even start mixing colours – a great thing to experience and learn at this age.

Only after kids have made their way through all the rooms can they go to the bathroom to play Scuba Splash – the weirdest game of all. With bouncy music and a weird theme, it somehow seems like it's here just because there was no room for it in *Monsters, Inc.* *Scream Team Training.*

Pappy is preparing the bath for Spot, but all sorts of items have fallen into the tub. Your mission: Put on scuba gear, enter the tub and retrieve the missing items – including Pappy's teeth. And that one just rubs me the wrong way. How do you explain dentures to a four year-old? But you have to because if kids don't retrieve them, Spot doesn't get a bath.

After a bubbling finale, kids can resume playing games or keep on clicking. They can also quit and come back later. But then they'll have to start all over again. ♦

## more INFO

*Rolie Polie Olie: The Search for Spot*  
\$29.99  
Disney Interactive  
www.disneyinteractive.com

Age level: 2 to 5

Requirements:

PC  
Pentium 166MHz or faster, Windows  
95/98/Me/XP  
8X CD-ROM, 32 MB RAM, 50 MB hard drive  
space, 16-bit Windows-compatible sound card,  
16-bit colour Windows-compatible video card,  
Java-compatible Web browser  
Mac  
G3 Processor or faster; OS 8.6 through OS X  
8X CD-ROM drive, 64 MB RAM, 50 MB hard  
disk space, thousands of millions of colours  
video display

## Be your own expert

continued from page 64

target. Read online notes to check whether the required skills are in line with your child's. For example, if your child excels in art, but is still grasping the ABCs, he or she might leap ahead in creativity programs, but have to go down a level for reading.

Like clothing, make sure programs can grow with your child. "Often we recommend something [the kids] can grow into rather than something that might be too easy and hence a less-valued investment," says Penney. But it really depends on the situation, i.e. number of children in the household, etc.

### 2. Suitable subject matter.

Even if the title you're thinking about scored high marks in every review, if the cast of characters is not to your child's liking, you're wasting your money. On the other hand, new titles with interesting new characters can be worth exploring.

There are programs that teach through creativity, problem solving, detective-like adventures and role-playing. Some require short attention spans, others require hours of sleuthing. Match your child's interests and abilities. Talk to your kids about what they like.

"It is really important that kids be included in the software purchase decision in terms of theme and characters, as what may seem really cool with parents won't always jive with their kids, resulting in an unrealized investment," adds Penney.

### 3. System compatibility.

When you head off to the store, make sure you know your system requirements.

"A lot of people don't check the system requirements before they buy the latest and greatest kids' titles, resulting in big disappointments for both parents and kids alike," says Penney.

They find themselves in a position where they either have to upgrade their computer (often the video card), or give the software to someone else (schools, libraries, friends), because most stores won't take back opened merchandise.

### 4. You're the expert!

Most importantly, don't expect someone else to answer your questions for you.

By the time you're dishing out dollars for children's software, you should be the expert.

How do YOU choose children's software? Let me know at: maragulens@yahoo.com. ♦

KIDS

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# Much profile: Namugenyi Kiwanuka

Who: Namugenyi Kiwanuka, MuchMusic VJ and videographer. She hosts the recently launched DownLo (Wednesdays, 9 p.m.) and Much Vibe (Saturdays, 2 p.m.)

Computer now used: IBM Thinkpad P3, Windows 2000, 192 MB RAM. When she tries to check the specs, the computer promptly freezes and she laughs. "At MuchMusic we spare no expense."

Computer first used: Brother word processor; "That was, like, grade 13."

Favorite computer: Apple iBook.

Other technical gadgetry in use at this time (cells, PDA, etc.): Cell phone.

Do you use your computer for play: Checking NBA scores and stats.

Best thing about the technology you have: Accessibility (e-mail).

Worst thing: Some sites are too elaborate and too slow. Also privacy or lack of privacy. I don't like the fact that someone can get access to my personal e-mails even after they've been deleted.

What can't you live without: Cell phone.



Namugenyi Kiwanuka, MuchMusic VJ and videographer

Is there anything you think you need: "Something like a cross between a pager, a cell phone and a Palm Pilot — so at 1 o'clock it would tell me, 'Now, it's 1 o'clock, you have to do this' and it would beep and then I'd have to read it or it would tell me verbally. Just to keep me organized because I'm very disorganized. And I tried using a Palm Pilot but, hmm, there went that idea."

What frustrates you the most about technology: The difference in quality between competing search engines. She says Google is currently the best. "Another thing that really bothers me is how slow the computer is sometimes. Because sometimes time is of the essence and if I'm going on air and I'm trying to find something quickly and the computer freezes, it's like, arrghh ... that's 70 seconds of valuable time!"

Personal take on issues dealing with technology: "I couldn't live without my cell phone, 'cos I'm hardly home. And sometimes it's bad to have a cell phone because if you're trying to dodge somebody — 'Well, I called you on your cell phone ...'

The only negative thing about cell phones are the roamer fees. It's just ridiculous. I just got a phone bill for, like, \$700 because I was in the States using it. I'm like — What?" ♦

—interview by Sam Okalow

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